AN INVESTIGATION OF THE IMPACT OF QUALITY OF SERVICE ON CUSTOMER SATISFACTION OF NAMPOWER RESIDENTIAL CUSTOMERS

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DEDICATION

This thesis is dedicated to my girlfriend, Albertina Ileka, and my two sons, Williams Etuna Namupala and Ethan Tukwatha Namupala. I love you all.

DECLARATION

I, Isaias Ndinoomwa Namupala, hereby declare that this study is my own work and is a true reflection of my research, and that this work, or any part thereof has not been submitted for a degree at any other institution.

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ABSTRACT

To remain competitive in the service industry, it is essential for companies to understand the concept of service quality and customer satisfaction. The purpose of this study was to gather more knowledge about the impact of service quality on customer satisfaction of NamPower residential customers in Namibia, using the five dimensions of the SERVQUAL model. The study investigated whether customer perceptions of NamPower services match their expectations; if perceptions exceeded expectations, then customer satisfaction has been attained and vice versa. The research was descriptive and quantitative in nature; it employed an online survey design. The structured questionnaire comprised 22 items of a modified SERVQUAL model measured on a 5-point Likert-scale from 'strongly agree' to 'strongly disagree'. The questionnaire distributed via e-mails to collect data from 338 residential NamPower customers. The results revealed that the overall quality of service did not satisfy NamPower customers. This stemmed from a negative gap that existed between customer expectation and perception in all the five dimensions of service quality. The overall mean expectation of NamPower's service quality was 4.280 and the overall mean perception was 3.132 resulting in the overall service quality gap of -1.148. These results further revealed that customer satisfaction towards NamPower services in Otjozondjupa, Khomas, Omaheke, Hardap and Karas region was significantly influenced by all five dimensions of service quality. On average, responsiveness and empathy dimension of service quality were found to have the most and least significant impact on customer satisfaction respectively. The findings of this study have the potential of influencing researchers and marketers to adopt the SERVQUAL method among different electricity utilities. The study suggests some marketing strategies for NamPower management in order to raise the level of customer satisfaction. It is recommended that NamPower conducts regular customer surveys to learn more about customers' expectations and perceptions.

Keywords: Service quality, SERVQUAL, Customer satisfaction, Customer expectations, Customer perceptions, Residential customers, Service quality dimensions.

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LIST OF ABBREVIATIONS

ECB	Electricity Control Board
ESI	Electricity Supply Industry
ESKOM	National power utility company of South Africa
M	Mean Score
NamPower	National power utility company of Namibia
NBRI	National Business Research Institute
NBS	Namibia Business School
NUST	Namibia University of Science and Technology
REDs	Regional Electricity Distributors
SERVPERF	Service Performance Model
SERVQUAL	Service Quality Model
TMQ	Total Quality Management
UNAM	University of Namibia

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 Introduction

This chapter presents the background of the study, which discusses the concept of service quality by explaining its relationship to customer satisfaction, focusing on issues relating to the electricity supply industry of Namibia. The chapter also gives an overview of NamPower as the institution on which the study is based. This chapter also highlights the statement of the problem, the objectives of the study, the significance of the study, limitations and delimitations of the study.

1.2 Background of the study

NamPower, a state utility monopoly, was established in Namibia in 1964 for the purpose of electricity generation, transmission, distribution and international trading under the supervision of the Electricity Control Board (Electricity Act, 2007). NamPower has for decades been at the centre of Namibia's socio-economic development, powering industries and the everyday lives of the Namibian nation. The company's vision is "to be a leading energy company in Africa, which excels in customer service, people development and technological innovation" (NamPower, 2017, p. 7). As an electricity company, NamPower understands that electricity plays an important role in the socio-economic development of Namibia. Utilities around the world, as government institutions in the public service, have a crucial responsibility to deliver services that maintain and improve the welfare of the society. Saini (2018b) asserts that the service sector contributes largely to the economic development of the nation. According to Singh, Satpal and Saini

(2016), electricity is one of the most widely used forms of energy, affecting the socio-economic development of a country critically. Therefore, the electricity sector needs to provide better service quality to flourish itself as customers have become more aware and concerned about the quality of power being supplied to them for which they are spending money. Poor customer service is a serious problem in Namibia. Parasuraman, Zeithaml and Berry (1985, 1988) note that service quality plays a major role in the service industry as it is a source of competitive advantage. Satapathy (2014) alludes that in the age of globalization, the service sector is now highly competitive and customers are now more than ever concerned about the quality of service they receive from service providers. Organisations should ensure that they meet their customers' expectations by enhancing service quality that will keep their customers satisfied.

Customer satisfaction can be defined as a measure of how the products and services of an enterprise meet or exceed customer expectations (Payne & Frow, 2013). Customers all over now prefer quality products or services. Therefore, service quality can be viewed as a strategic tool to strengthen competitive advantages that can lead to improved corporate image and reputation, customer loyalty and profitability for the business (Abd-El-Salam, Shawky & El-Nahas, 2013). Good service quality brings the customer satisfaction and their loyalty (Chodzaza & Gombachika, 2013). Saini (2018a) confirms that good service quality results in financial gains of utilities as higher customers' perceptions towards utility will result in a reduction of electricity theft, higher bill collection and other positive impacts. Moreover, satisfied customers will increase in number and they will buy electricity frequently; they will also pay their bills on time, and this improves cash flow and the livelihood of the organisation (Besterfield, Besterfield-Michna, Besterfield, &

Besterfield-Sacre, 2010). Hence, evaluation of service quality is a critical issue for all service organisations such as NamPower. One way of measuring service quality, which is quite popular, is through the application of SERVQUAL (Parasuraman et al., (1988). SERVQUAL basically measures quality in terms of five dimensions of service, namely the tangibles, reliability, responsiveness, assurance and empathy.

The public sector has come under increasing pressure to deliver quality services, improve efficiencies, and respond to government (Chodzaza & Gombachika, 2013). In South Africa, there have been a lot of service delivery disputes and protests recently stemming from dissatisfaction with public service delivery in general, and Namibians are following suit. To keep up with this demand of quality service provision, NamPower is aims to accomplish a high level of customer satisfaction by excelling in service quality, which can be a challenging task (NamPower, 2017). Strategic Planning by an organisation's management is the mother or the backbone of Customer Satisfaction. Mansori and Hoe (2017) argue that the customer is central to the organisation and assessing customer satisfaction is a vital element in any strategy for business performance improvement. Although there are many approaches to customer satisfaction research, the statics and prior approach to service are often preferred by researchers, with the SERVQUAL model widely utilised to measure the service gap (Bård, Brown, & Gremler, 2011). Yingbao and Li's (2011) study on perceived service quality evaluation in power concluded that empirical results show that the SERVQUAL model is applicable and effective in the electricity supply industry.

Unsatisfactory service delivery is a problem in Namibia, particularly in the public sector. Thus, the effectiveness of public sector service delivery feature is the key element of the Effective Governance pillar of the Harambee Prosperity Plan (2014). A customer service survey commissioned by the Office of the Prime Minister of Namibia in 2017 concluded that many people expressed dissatisfaction with service delivery by most government ministries and SOEs (Shinovene, 2018). The survey focused on 19 public institutions including NamPower. According to Wahab and Suhaimim (2012), some of the factors that hinder service quality in the electricity supply industry include unanswered calls, bills/invoices queries, incompetent call centre agents, inconsistent electricity supply and power cuts without notice. Similarly, these are some of the main reasons contributing to dissatisfaction in NamPower's service delivery. The electricity utility industry in Namibia is vertically integrated with NamPower being the sole public supplier of electricity. Therefore, there is no competition in the generation, transmission and distribution of electricity.

Although the level of NamPower customer satisfaction has little impact on its competitiveness due to the electricity market being a monopoly, it is still very crucial to conduct regular customer satisfaction survey in order to protect consumer interests against possible price exploitation, degradation of the quality of supply and poor customer service (Chau, 2009). This study, therefore, has been prompted by the need to find a solution to the continuing problem of poor service quality encountered by residential customers. This study assesses the impact of service quality on customer satisfaction on residential customers of a public electricity utility organisation in Namibia, using correlation and regression analyses. Additionally, the study assesses the level of service quality as

perceived by NamPower's residential customers using thr SERVQUAL model. Furthermore, this study investigated whether customer perceptions match their expectations. Factors contributing to low customer satisfaction were identified and suggestions for addressing them were made in an effort to increase customer satisfaction in the Electricity Supply Industry of Namibia. The study has a significant diagnostic value in the sense that it identifies areas where the NamPower must direct its resources in order to satisfy its residential customers. In addition, the study investigated the mediator role of customer satisfaction on service quality in Namibia electricity sector, as well as provide a comprehensive framework for service quality dimension with respect to customer satisfaction. It has been discovered that there are few studies which examine customer satisfaction in the electricity supply industry of Namibia. This study focused on the functional quality offered by NamPower to its residential customers in the central and southern regions of Namibia.

1.3 Statement of the problem

Khan and Fasih (2014) maintain that organisations with satisfactory service quality are more likely to have fewer customer complaints, high levels of customer loyalty and positive corporate image. Hence, service quality is a fundamental business component that requires constant improvements and reviews (Ladhari, 2009). Most of the Namibian public institutions' level of service quality is below the minimal expectations, with the electricity sector scoring only 52% of the overall service performance rating (Shinovene, 2018). Furthermore, the Harambee Prosperity Plan (HPP) specifies that customer satisfaction rating of Government and State-Owned Enterprises (SOEs) such as

NamPower must be increased to 70% by 2020 (Harambee Prosperity Plan, 2014). According to Nashappi, Omari and Nyamonaa (2014), long unexplained power outages, poor response time to queries and emergencies, long reconnection time and account closure and refund time, are some of the factors lead to the dissatisfaction of electricity customers. This poses a serious challenge to Namibian commercial farmers as they rely on electricity from NamPower both for residential consumption and to power boreholes which are used to pump water for their animals. Therefore, it is crucial for NamPower to measure service quality as it is the most prioritised factor that customers look at when evaluating their level of satisfaction in service provision (Osotimehin, Hassan & Abass, 2015). Moreover, customers who receive better service complain less and therefore are more likely to create fewer problems for employees. Most electricity utilities, including NamPower, experience poor service complaints from their customers. It is for this reason this study investigated the effect of service quality on customer satisfaction of NamPower residential customers (ECB, 2017; Nashappi, et al., 2014).

Since customers are recipients of NamPower services, they are essential stakeholders to provide feedback on services they receive and advise on their needs and expectations. In acknowledgement of this fact, NamPower has seen the need to constantly improve service quality by conducting an external stakeholder perception survey every second year to gauge perceptions of its various stakeholders (NamPower, 2017). However, this survey mainly focuses on key stakeholders excluding residential customers, resulting in an impression that no efforts are being made to improve the quality of such services. Public service organisations mainly have a built-in customer base. As a result of the built-in customer base, the concepts of service quality and customer satisfaction have not received

attention among such institutions (Akinboade, Kinfack & Mokwena, 2012). This is mainly because the construct of service quality is difficult to define and measure (Parasuraman et al., 1988; Yingbao & Li, 2011). According to Achchuthan, Sivathaasa and Jayasundra (2014), studies on service quality in the electricity sector have not been studied and approached fruitfully in both developed and developing countries. Hence, the purpose of this study was to fill this research gap by investigating and assessing the quality of NamPower services and examining the effects of dimensions of service quality on the degree of customer satisfaction of NamPower residential customers.

1.4 Objectives of the Study

The main objective of this study was to investigate the impact of quality of service on customer satisfaction of NamPower residential customers. This key objective was achieved by:

- Assessing customers' expectations and perceptions level towards the quality of services provided to NamPower residential customers.
- Analysing the discrepancy gap between customers' expectations and perceptions towards the quality of NamPower services.
- Assessing the impact of the five service quality dimensions on customer satisfaction of NamPower residential customers using the SERVQUAL model.

1.5 Significance of the Study

Low customer satisfaction has been a chronic problem facing most public offices in Namibia (Shinovene, 2018). In order for NamPower to tackle the service quality and

customer satisfaction problem it was necessary to conduct a study of this nature. Despite the significant academic interest in service quality and customer satisfaction, this study contributes to the body of knowledge in the field of service quality and customer satisfaction. The findings of the study can help improve the quality of NamPower services; the findings can also be used by policymakers and researchers in making informed decisions in customer satisfaction as a field. The knowledge gained could contribute to the ongoing efforts of improving service quality in the electricity sector of Namibia.

1.6 Limitation of the study

Due to the limited literature on service quality and customer satisfaction in the Namibian power sector, the literature review was limited to that of other countries. Another limitation emanated from the use of non-random convenience sampling, which can result in findings that could not be generalised to all NamPower customers. Furthermore, 338 responses were large enough to generate useful results but the number is small for the findings to be representative of entire Namibian power sector. The SERVQUAL instrument (Parasuraman et al., 1985, 1988) used for data collection has been criticised by various researchers (Cronin & Taylor, 1992). As long as this instrument suffers from criticisms, the current study will also suffer from similar criticisms. Moreover, some of the limitations stemmed from the SERVEQUAL model that is still to be tested to measure service quality in the Namibian electricity sector. Finally, the present study has examined customer satisfaction only through service quality. However, there are several factors that impact satisfaction such as price, trust, and loyalty.

1.7 Delimitation of the study

The study was carried out in Otjozondjupa, Khomas, Omaheke, Hardap and Karas regions in Namibia between August 2018 and September 2018. These regions were selected because these are the only regions in Namibia where NamPower is responsible for directly distributing electricity to the customers. The research only focused on NamPower residential customers in the said four regions. This customer group was chosen because there is no known recent study conducted to investigate and measure the service quality of direct consumers of electricity services in Namibia. The study sample was selected from the identified population adding up to 353 respondents (Yamane, 1967) and picked up using the convenience sampling method. Furthermore, the study used primary data which was collected through the use of an online questionnaire.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The preceding chapter gave the background of the study. This chapter reviews some of the relevant literature on customer satisfaction, service quality, SERVQUAL and other concepts that are related to the study. The chapter discusses the concept of service quality and its relationship to customer satisfaction. The chapter also touches on empirical studies on service quality in the power sector, and SERVQUAL as the preferred model for measuring service quality. Further, the chapter developed a conceptual framework that links all the factors which affect service quality and customer satisfaction. This is the framework that was used to achieve the research objectives.

2.2 The Concept of Service Quality

The nature of services is that they are intangible, heterogeneous and inseparable. That is, they cannot be touched, seen, held, or stored. Nashappi, et al. (2014) argues that it is difficult to establish exact manufacturing specifications regarding the uniform quality of services because they are performances and experiences rather than objects. The performance of services often differs from one provider to another, from customer to customer, and from day to day (Zeithaml, Bitner, & Gremler, 2006). Additionally, services are generally produced and consumed at the same time; evaluation of services happens at consumption. On the other hand, quality can be described as the ability of any product or service that can meet customers' expectations (Shanaki, Ranjbar, & Shakhsian, 2012). It

is important that NamPower knows what these needs and expectations are, understand them, and be able to measure its own ability to meet these expectations. From these definitions, it is apparent that the quality of services is linked to the offer value which results in satisfaction or dissatisfaction of customers. This makes it possible for the present study to identify dimensions of service quality which are significant to customers and not those that are merely based on judgments of business owners.

The literature on marketing is replete with studies on service quality (Kaura, 2015). However, Saini (2018d) maintains that service quality can still be investigated further for the prosperity of the service industry. The aforementioned author further argues that service quality is one of the pivotal concerns for any service industry whether it is banking, hotels, shopping malls or electricity distribution utilities. It is now widely accepted that service quality is one of the bases of the success of any organisation (Chinomona, Masinge, & Sandada, 2015). According to Seto-Pamires (2012), service quality refers to the ability of a service provider to provide a service that meets or exceed customer expectations. Going back to the root of service quality, Parasuraman et al. (1985) describe service quality as the degree of difference between the customers' expectations for service and their actual perceptions of performance. In this study, service quality is defined as the difference between customers' expectation of service before the service encounter and customers' perception of service they received (Zeithaml et al., 2006). Therefore, it is not difficult to see from the above definitions why service quality is regarded as an essential element of business success (Lisch, 2014). The quality of NamPower service is low when customer expectations are greater than perceptions, resulting in customer dissatisfaction. The quality is high when perceptions exceed expectations, resulting in customer

satisfaction (Parasuraman et al., 1985). Therefore, the present study is an assessment of the ability of NamPower to meet or exceed expectations of their customers and thereby evaluating satisfaction of such customers.

Parasuraman et al. (1988) argue that service quality is more difficult to measure than products quality because it is intangible, heterogeneous, inseparable, and perishable. Although service quality is not easily measurable, it requires that all organisations, but especially service organisation, should give service quality adequate attention. In spite of its many criticisms, the SERVQUAL has become widely accepted as a useful model for measuring service quality in a variety of service industries, particularly in the public sector (Abili, Thani, & Afarinandehbin, 2012), including the electricity sector (Saini, 2018; Yingbao & Li, 2011). Saini (2018c) further asserts that the SERVQUAL model has become the favourite choice and standard tool of researchers and academicians for measuring service quality in different fields.

An important goal of public sector services is to improve the quality of life of the community that is served. For this goal to be achieved, the service quality must be high, but this is often not the case. What has perpetuated this situation is that service delivery in the public sector is usually bedevilled by difficulties in measuring outcomes; and though they may complain once in a while, scrutiny from the citizenry and the press do not go far enough (Nawaz, Nazir, Jamil, Aftab, & Razzaq, 2016; Ramseook-Munhurrun, Lukea-Bhiwajee, & Naidoo, 2010). Poor service delivery from public sector institutions reflects negatively on the government, as citizens lose confidence not only in the service provider, but also in the government. Issues of staff capacity, information communication

technology, strategic quality planning, cultural orientation, leadership, people and systems, influence service quality outcome and delivery (Cheruiyot, Maru, & Cheruiyot, 2013). Developing a deeper understanding of the way customers experience and evaluate service processes has been a challenge which organisations that undertake the design, delivery, and documentation of a service offering face (Bitner, Ostrom, & Morgan, 2007). This research was conducted to help address this challenge in the power sector of Namibia.

2.3 The Concept of Customer Satisfaction

A customer is a key stakeholder of any business organisation; a customer provides payment in exchange for goods or services provided by the organisation with the aim of satisfying their needs. Therefore, customers expect superior value for their money. This researcher acknowledges the fact that there are conceptual differences between a customer and a consumer, but the present study has adopted the term 'customer' for ease of discussion. Kotler and Keller (2012) refer to satisfaction as a person's feelings of pleasure or disappointment that results from comparing a product's perceived performance or outcome with their expectations. Similarly, Cronin and Taylor (1992), and Zeithaml et al. (2006) describe the concept of satisfaction as a relation to customer's overall evaluation based in consumption experience of product or service. According to Seto-Pamies (2012), customer satisfaction occurs when the service provider positively confirms to customer expectations.

Furthermore, Mohammad and Alhamadan (2011) advance that most discussions on customer satisfaction are based on customer expectation of service delivery, the actual

delivery of the customer experience, and expectation that is either exceeded or unmet. The expectation may exist before the customer applies for electricity; therefore, it is vital to the researcher to determine what customers expect before applying for NamPower services. Customer Satisfaction will help NamPower to determine whether the services they provide meet or further exceed the expectations of their customers. Satapathy, Mahapatra, Patel, Biswas and Mishra (2014) suggest that it is important to understand the requirements of the customers so that policies can be formulated accordingly, in order to improve customer satisfaction and retention. Because NamPower is service oriented, it is imperative for it to offer high-quality customer service, thereby enhancing customer satisfaction. Customer satisfaction holds a dominant place in the service industry as it provides steps to the service organisations to achieve business success. Therefore, it is vital for NamPower to understand how customer expectation is shaped in order to be aware of the factors that impact satisfaction of their customers. It is also important to assess customers' views on the causes of customer satisfaction or dissatisfaction so that NamPower can direct resources to those areas which will result in the greatest satisfaction of its customers. An effort is made in this study to find out which service quality dimension may enhance or diminish customer satisfaction of NamPower residential customers.

Understanding the impact of service quality dimensions on customer satisfaction is essential because customer satisfaction is an important factor for sustained business success (Navaratnam & Harris, 2008). In the study that was carried out on customer satisfaction on the Sicily Island in Italy, it was found that the level of customer satisfaction can be improved by improving the quality of its services, implementing staff training, courtesy and friendless of staff and lowering prices (Dominici & Guzzo, 2010). Marwa,

Mitonga and Hofnie-//Hoebes (2017) conducted a study on customers' satisfaction of the occupational therapy services of patients at Katutura State hospital in Namibia. They concluded that patients are slightly satisfied with the services although there are some other factors such poor physical environment, longer waiting time, missed appointments and unavailability of consent forms. One study that was carried out in the public transport industry of Namibia by Madejski, Simbi and Shangheta (2016) claims that the quality of services provided by most public transport operators in Namibia is poor and that there is a need for education and training for drivers on the importance of customer satisfaction.

Several authors have also arrived at similar conclusions demonstrating customer satisfaction and its past history in the power sector context (Singh, et al., 2016). The customer satisfaction of electrical power consumers also depends on their perceptions and expectations. Saini (2017) confirms that customer satisfaction is measured on the basis of different dimensions of service quality like tangibility, reliability, empathy and responsiveness of the electricity utilities. Agreeing with this development are Rekettye and Tersztyánszky (2001) who state that electricity utilities admit that customer satisfaction is an important issue even in a utility company having a monopoly position like NamPower.

Customer satisfaction is a critical business requirement that requires continuous assessment. Measuring customer satisfaction is basically the same as measuring human feelings which could be very difficult at times. The National Business Research Institute (NBRI) advises a possible set of dimensions that one can employ in measuring customer satisfaction. The set of dimensions includes service quality, pricing, trust in company

employees, complaints or problems and customer imaging of the company brand (NBRI, 2009). Hence, for NamPower to stay ahead as the leader in the electricity supply industry of the country, they must regularly conduct customer satisfaction surveys to determine the areas in which they need to improve and benchmark with other service providers to ensure that they provide satisfactory services to their customers. The present study uses the dimensions of service quality to measure the levels of customer satisfaction of NamPower residential customers.

2.4 Relationship between Customer Satisfaction and Service Quality

Customer satisfaction has been considered to be based on the customer's perception on a particular service encounter. Rajeswari, Srinivasulu and Thiyagarajan (2017) suggest that service quality is an essential determinant of customer satisfaction. In an effort to satisfy customers, customer satisfaction has been addressed side by side with the concept of Total Quality Management (TQM) (Binshan, Tan, Chong, Ooi, & Chong, 2011). As a result, many researchers have explored the relationship between service quality and customer satisfaction mainly in the context of the private sector such as banking, education and hospitals (Arun & Mittal, 2016; Cheruiyot et al., 2013; Gunarathne, 2014). Some researchers have studied the relationship between service quality and customer satisfaction stemming from the perspective that service quality and customer satisfaction are the same concept (Toosi, Niya & Pooya, 2014). Other scholars are of the view that service quality and customer satisfaction are different, but related concepts (Arun & Mittal, 2016). Kiran (2010) argues that customer satisfaction is perceived as a broader concept, while service quality is perceived as an element of customer satisfaction.

However, some researchers specifically claim that service quality is a precursor of customer satisfaction (Hu, Kandampully, & Juwaheer, 2009; Culiberg & Rojsek, 2010; Ganguli & Roy, 2011).

The debate whether service quality precedes customer satisfaction or whether customer satisfaction drives service quality is common in literature. Cronin and Taylor (1992) state that service quality leads to customer satisfaction. However, Jamal and Naser (2003) and Baumann et al. (2007) (cited in Izogo & Ogba, 2015), found no significant relationship between customer satisfaction and service quality's tangible aspects of the service environment. The present study adopts the view that service quality significantly influences customer satisfaction because of its logical appeal. This view confirms Culiberg and Rojsek's (2010) conclusion that perceived service quality is one of the antecedents to overall customer satisfaction. Moreover, Parasuraman et al. (1985) suggest that when perceived service quality is high, then it will lead to an increase in customer satisfaction. This is evident from a study by Appannan, Doraisamy and Hui (2013), which concluded that in retail banking, the degree of customer satisfaction is generally influenced by the quality of services. If the customers of NamPower are to be satisfied with the services they receive, then it is very important that NamPower should continually assess and improve the service quality it provides. Therefore, it is crucial to assess these two concepts together in the case of NamPower residential customers and determine whether service quality is a factor that could lead to customer satisfaction in the electricity supply industry in Namibia.

Various scholars have conducted empirical studies on the relationship between service quality and customer satisfaction in different service settings. Hu et al. (2009) conducted a study to empirically examine the relationships and impacts of service quality, perceived value, customer satisfaction, and image of selected hotels in Mauritius. The results of the study confirm that high service quality leads to customer satisfaction, superior perceived value and favourable perceptions of corporate image. Aliata, Ojera, and Mise (2016) conducted a study to empirically evaluate the relationship between service quality and customer satisfaction of commercial bank customers in the banking sector. The results show that there is a significant association between service quality and customer satisfaction, indicating that all five service quality dimensions are an important feature in explaining service quality and in turn having a positive impact on customer satisfaction. These findings are similar to those of Mwanza and Chingarande (2013). Khurana (2014) concluded that there is a positive link between customer satisfaction and service quality in the Indian banking industry. Their study shows that empathy and tangibility dimensions of service quality have the greatest impact on customer satisfaction while reliability, assurance and responsiveness have a negligible impact on customer satisfaction. Gunarathne (2014) reports a positive relationship between service quality and customer satisfaction in the Sri Lankan hotel industry. However, it is also reported that assurance is the least preferred dimension of service quality by the hotel customers. Khurana's (2014) found that tangibility and assurance dimension of service quality have more impact on customer satisfaction Indian life insurance industry.

2.5 Empirical Studies on Service Quality in Power Sector

There is less literature in the field of electricity sector involving service quality, particularly in developing countries of Southern Africa (Chinomona & Sandada, 2014). Achchuthan et al. (2014) argue that service quality in the electricity sector has not been studied and approached fruitfully in both developed and developing countries. Available studies are on technical quality which is beyond the scope of this research. Nonetheless, the researcher is going to present the few studies that have been found on the topic. Electricity supply companies, like other service organisations, rely on customer surveys to assess the quality of their services and customer satisfaction. A customer satisfaction survey on electricity supply in Nigeria conducted by Philips Consulting Limited (2013), confirms that many customers were not satisfied with the current state of power supply in Nigeria. Customers singled out inconsistent power supply, frequent power outages due to overloaded transformers, non-availability of modern pre-paid meters, voltage fluctuations, high electricity tariff, poor customer service, and slow response to customer complaints to be some of the challenges experienced by Nigerian electricity users. Usman (2013) also confirms that large a proportion of customers in the selected electricity distribution zones in Nigeria are highly dissatisfied with the several aspects of the power service quality from the quality of power supply, to the attitude of staff and system network reliability.

Chodzaza and Gombachika (2013) carried out a survey on Malawian public electricity utility with a view to ascertain and assess the relationship between service quality, customer satisfaction and customer loyalty among industrial customers. The study revealed that service quality is poor and industrial customers are dissatisfied with all dimensions of service quality. This is consistent with findings of Odongo and Ngacho

(2015) when they conducted a study in Kenya to assess the customer's experience of the quality of services offered by Kenya Power. In addition to frequent blackouts, Nashappi, et al. (2014) found that poor response time to queries and emergencies power outages, long reconnection time and account closure and refund time are some of the factors affecting customer satisfaction of Kenta Power customers. However, most Kenya power customers were satisfied with the dimensions of tangibility and assurance, but they were not satisfied with the service quality aspects of reliability and responsiveness (Nashappi, et al., 2014). When investigating electricity pre-paid services in South Africa, Chinomona and Sandada (2014) concluded that the quality of service of the ESKOM prepaid billing system positively impacts customers' satisfaction and trust in a significant way. A study that was done by Medjoudj, Laifa and Aissani (2012) to investigate the customer satisfaction of power users in Algeria also confirms that reliability dimension is one of the most important criteria for customer satisfaction. Finally, the studies suggest that there is a strong relationship between service quality and customer satisfaction (Chodzaza & Gombachika, 2013; Nashappi, et al., 2014: Ngacho, 2015).

From the international sphere, Satapathy (2014) analysed service quality enhancement in electricity utility sector of India and found that electricity service has a direct relationship with all five dimensions of service quality, namely, reliability, tangibility, empathy, responsiveness and assurance. In a supportive way, Gunatilake, Patail and Yang (2012) confirm existing poor electricity service in rural Madhya Pradesh areas of India where they argue that customer satisfaction can be significantly enhanced if the service quality, transparency, customer service, and accuracy of billing are also improved simultaneously. In Sri Lanka, Achchuthan et al. (2014) studied the dimensions of service quality model

for electricity services provided by the Ceylon Electricity Board. Their findings led them to five dimensions which they classified as the first order factors of service quality dimensions of electricity services in Sri Lankan context. These dimensions were tangibility, empathy, responsiveness, reliability, and assurance; these dimensions are consistent with that of Parasuraman et al. (1985, 1988) original attributes of service quality. The present study used the same dimensions to assess their impact on the levels of customer satisfaction of NamPower residential customers. Chau (2009) investigated service quality in UK electricity distribution networks where the study acknowledged the importance of regulating service quality in monopoly network utilities. Performance levels of service quality in the UK are improving over time due to strict regulations and improved technology. However, this analysis is insufficient for the present study because Chau (2009) focuses on the distribution network quality and not on customers who are the recipient of the services.

One scholar who has done extensive research on the importance of service quality in the power sector is Dr. Sunita Saini of Deenbandhu Chhotu Ram University of Science and Technology, Murthal, Sonepat, Haryana, India. She has analysed the importance of service quality for the progress of the electricity industry and the measurement of the level of service quality in terms of different parameters like empathy, reliability, tangibility, assurance, communication, responsiveness, security, credibility, etc. Some of the recent significant works that are relevant to the present study are presented in Table 1.

Table 2.1: Recent studies on service quality in power sector by Saini (2017, 2018)

Authors and Date	Title of the paper	Key Findings
Saini, (2017).	Customer Satisfaction in Power Sector: A Perspective	The results of the study indicate that service quality is a key determinant of customer satisfaction in the power sector.
Saini, Singh and Satpal, (2016).	Service Quality Assessment of Utility Company in Haryana using SERVQUAL Model	There is a negative gap between customers' perceptions and expectations towards the company's services when analysed on ten original dimensions of SERVQUAL model. The dimension of tangibility has maximum gap and communication has the lowest.
Saini, (2018a).	Difference in Customer Expectations and Perceptions towards Electric Utility	The results indicate that all dimensions of SERVQUAL have a large difference between customers' expectations and perceptions; customers are somehow satisfied with communications dimension of the utility's service quality and least satisfied with tangibility.
Saini, (2018b).	Appraisal of service quality in power sector of NCR	These five service quality dimensions: reliability, empathy, assurance, tangibility and responsiveness are good measure of the quality of electricity services provided by electricity companies in NCR.
Saini, (2018c).	Analysis of Service Quality of Power Utilities	Concluded that measuring service quality is a must for the service utilities in this world of competition and SERVQUAL is the preferred model to assess service quality.
Saini, (2018d).	Service Quality of Electric Utilities in Haryana – A Comparison of North and South Haryana	The findings show that both utilities do not meet customer expectations due to unsatisfactory services on different dimensions of service quality.

Source: Author's literature review

2.6 Service Quality Models

There are different service quality models that have been developed to measure the quality of services. Because of the fact that the drivers of customer satisfaction, namely, service quality dimensions, are so diverse and evolving, no single instrument for measuring service quality has yet been developed to explain fully the real quality dimensions that customers use to judge their assessment of and satisfaction with the provided service. There are two competing models for measuring service quality: SERVQUAL of Parasurananm et al. (1985, 1988) and SERVPERF of Cronin and Taylor (1992). SERVQUAL is an instrument that measures the gap between expected service and perceived service (Parasuraman et al., 1985, 1988). SERVQUAL directly measures both expectations and perceptions of performance, while SERVPERF only measures performance of service (Al-Alak et al., 2010). Thus, SERVPERF suggests that directly measuring performance expectations is needless. Both SERVQUAL and SERVPERF have been popular among researchers over the last several years. Nevertheless, although SERVPERF gained popularity, it has not surpassed SERVQUAL's usage among researchers (Harmse, 2012). Although there are researchers who argue that SERVPERF is both theoretically and empirically superior to SERVQUAL (Cronin & Taylor,1992; Martinez & Martinez, 2010), it was also found that SERVPERF is much more industry-specific, posing limitations on its application in a wide variety of service industries, hence lessening its popularity among service quality scholars. Therefore, SERVQUAL remains the most tried and tested service quality model that can be used for benchmarking purposes in the Namibian power sector.

Another measurement for service quality that has been used by researchers is the Gronroos service quality model (Binshan et al., 2011) which has two sides: the technical quality which comprises what is provided and functional quality which measures how it is provided (Gronroos, 1984; Sanchez-Rodriguez et al., 2011). Functional quality can include the care and manner of the personnel involved in service delivery processes, in line with the SERVQUAL model (Binshan et al., 2011). There is also the Haywood-Farmer's conceptual model of service quality which suggests that services have three basic attributes: physical facilities, processes and procedures; people's behaviour elements; and professional judgement (Harmse, 2012). Emphasis here is place on consistently meeting customer preferences and expectations, which is practically impossible.

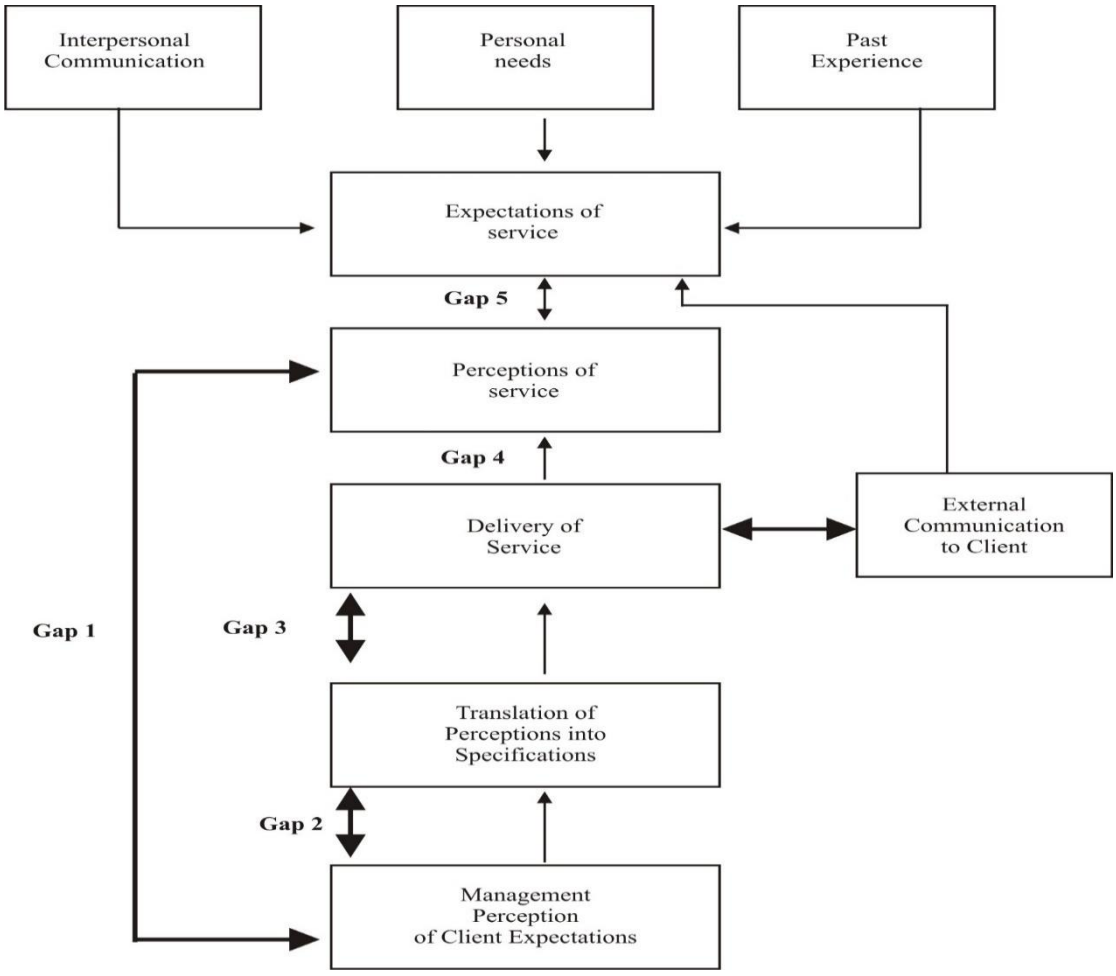
2.7 The Service Gap and SERVQUAL approach

2.7.1 The Service Gap

It is crucial that organisations measure service quality. However, due to its distinctive aspects, it remains a challenge to how organisations can effectively measure service quality. The Service Gap concept developed in the USA by Parasuraman et al. (1985) is one approach to measuring service quality. This gap is measured in various ways: between customer expectations and perceptions; between customer expectations and managers' perceptions of those expectations, and so on (see Figure 1). Kassim et al. (2010) recommended a five-point Likert scale ("strongly agree" (5) to "strongly disagree" (1) when collecting customer feedback about expectations and perceptions of the services across the battery of service attributes.

The ‘gap’ between the expected service and the perceived service provides the measure of perceived service quality. The benefit of this analysis is that it enables companies to understand in more detail the various causes of customer dissatisfaction, and so take appropriate corrective action. Parasuraman et al.’s (1985, 1991, 1993) theory emphasised that in order to have satisfied customers, an organisation (e.g. NamPower) needs to ensure that the customers’ perceptions of service are as close as possible to their expectations.

Figure 2.1: Services Quality Model



Source: Parasuraman, et al. (1985, p. 44)

It is reported that Parasuraman et al. (1985, 1988), who developed the tool, had argued that, “with minor modifications, SERVQUAL can be adapted to any service organisation (both private and public)” Chatzoglou, Chatzoudes, Vraimaki and Diamantidis, (2013). Furthermore, Saini (2018c) asserts that the SERVQUAL model has become the favourite choice and standard tool of researchers and academicians for measuring service quality in different fields. The SERVQUAL model’s gap concept is relevant for analysing service delivered by NamPower because there are likely to be gaps between what management thinks the customers expect and what the customers really expect, and between what the customers perceive and what they expect. With a slight modification of the instrument to fit electricity sector settings, this study used the SERVQUAL model to measure the quality of electrical services provided to NamPower residential customers.

2.7.2 SERVQUAL as a measure of Service Quality and Customer Satisfaction in the public sector

The SERVQUAL model is one of the most widely accepted models for measuring service quality (Ho & Lin, 2010; Kassim et al, 2010; Saini, 2017). Researchers like Chatzoglou et al. (2013), Chodzaza and Gombachika (2013) and Nashappi (2014) have observed that SERVQUAL can be successfully applied in the public sector, provided that it is appropriately tailored to fit the context of the public organisation. It is for this reason that the same model was adopted for this study to measure the quality of NamPower services. This instrument is based on the five dimensions of service quality that were developed by (Parasuraman et al., 1988) and refined by (Parasuraman et al., 1993). The five dimensions

are reliability, responsiveness, assurance, empathy and tangibles. The dimensions of SERVQUAL model are discussed in detail in the following section.

2.7.3 The SERVQUAL and Its Dimensions

As mentioned above, the SERVQUAL model refers to five service quality dimensions. Culiberg and Rojsek (2010, p. 152) explain the quality dimensions as illustrated below.

2.7.3.1 Reliability

This is defined as the ability to perform the promised service dependably and accurately. Reliability is about dependability and consistency in the provision of service and meeting customers' needs. It relates in this case to NamPower meeting its promises. Parasuraman et al. (1988) found reliability to be the most important determinant of perception of quality of service.

2.7.3.2 Responsiveness

This refers to the promptness with which services and help are provided to customers; so the speed of reaction to situations plays a vital role. For service delivery by NamPower, responsiveness entails the timely provision of electricity service by NamPower technicians and their willingness to go an extra mile. This dimension takes into account the openness and speed with which NamPower personnel address the customer concerns, needs, questions or complaints (Ladhari, 2009). When it comes to responsiveness, customers are very sensitive to the difference between cases in which NamPower is not in a position to do something about their concerns and cases in which NamPower is able to do something, but does not do anything about it and does not explain its difficulty to the customer (Electricity Control Board [ECB], 2017).

2.7.3.3 Assurance

Assurance refers to the knowledge and courtesy of employees and their ability to inspire trust and confidence in dealing with customers through their knowledge of processes, politeness and their trustworthiness. So when applied to service delivery by NamPower, assurance indicates whether the customers sense that the employees are competent in what they are doing. A positive customer perception in this regard will develop confidence and trust in NamPower.

2.7.3.4 Empathy

The caring and individualised attention that an organisation is able to provide to its customers (Sharma, 2010). In the case of NamPower, customers will look specifically at the extent to which NamPower's employees listen to their needs and show an interest in assisting them.

2.7.3.5 Tangibles

Tangibles are the appearance of physical facilities, equipment as well as personnel and communication materials that inspire confidence in the organisation's ability to provide the service. Tangibles include all physical attributes of the service delivery environment, including technicians' appearance, electrical apparatus equipment used, and the appearance of electricity stations. Tangibles often assume great importance because services are not tangible, but intangible. So customers tend to look for indications of the quality of services to be offered from tangible things around the service, such as buildings, equipment and personnel (Wahab & Suhaimi, 2012). The ambience NamPower's tangibles has a significant impact on customers and affects how they perceive the service.

2.7.4 Criticism of the SERVQUAL

The SERVQUAL model is one of the dependable models of service quality measurement (Ladhari, 2009), yet it has had some criticisms. Some authors have questioned the psychometric soundness and usefulness of the instrument (Cronin and Taylor, 1992). Buttle (1996), Martinez and Martinez (2010), and Adil, Ghaswyneh and Albkour (2013) have all questioned the use of the gap scores to measure quality. A number of researchers have argued that a generic instrument such as SERVQUAL is not an appropriate measure of service quality across many different industries. After many years of review, there is no agreement on the number of SERVQUAL dimensions that can uniformly be used, as proposed by the original developers (Sangeetha & Mahalingam, 2011; Martinez & Martinex, 2010). Others have also argued that if customers have a negative experience with service, they will be likely to overemphasise their expectations and that SERVQUAL focuses heavily on the process of service delivery and not on the resulting outcome of the service experience (Buttle, 1996). The fact that SERVQUAL has been modified to a certain extent by some researchers to fit the context of their studies is an indication of its flexibility; for example, Kong and Muthusamy (2011) adapted it for a study on higher education and Mohammad et al. (2011) for a study on commercial banks.

The theoretical criticism includes the following fears: the five different dimensions of the instrument are not universal to different service sectors; the number of dimensions involving service quality depends on the framework of each study; items do not always weigh the same on to the corresponding factors; there is a high degree of inter-correlation between the five dimensions and the five-point Likert scale associated with the survey of SERVQUAL is generally flawed (Sangeetha & Mahalingam, 2011). There is also the

inability of SERVQUAL to provide management with sufficient information for strategy implementation and resource allocation aimed at enhancing customer satisfaction (Landrum, Prybutok, Zhang, & Peak, 2009) which may be a major limitation to the study. Adi et al. (2013) further argue that because there has been additions and subtractions when SERVQUAL is used in different service settings, the model is not stable.

The prevalent application of SERVQUAL model encourages its future utilisation as a method for measuring service quality in various business sectors and service industries. SERVQUAL was designed as a measure for the private sector; however, its designers (Parasuraman et al., 1985, 1988) have echoed that with minor modifications, SERVQUAL may be adapted to any service organisation (both private and public). Despite its limitations and criticisms, SERVQUAL remains the most widely used measure of service quality by researchers (Rodrigues et.al., 2011; Saraei & Amini, 2012) and continues to be used in a variety of contexts, such as the banking sector (Khan & Fasih, 2014), universities (Cheruiyot et al., 2013), public sector (Selvakumar, 2015 and Nawaz et al., 2016), local authorities (Akinboade et al., 2012) and power sector (Achchuthan et al., 2014; Singh et al., 2016; Saini, 2018). All these researchers have argued that the SERVQUAL model will prevail as a service quality measure until a better and simple model is developed.

2.8 Research Gap

After critical review of literature where the SERVQUAL model was used to measure service quality, this researcher came to a deduction that many studies have been conducted in different service sectors such as hospitality, banking, education, health, transport, etc.,

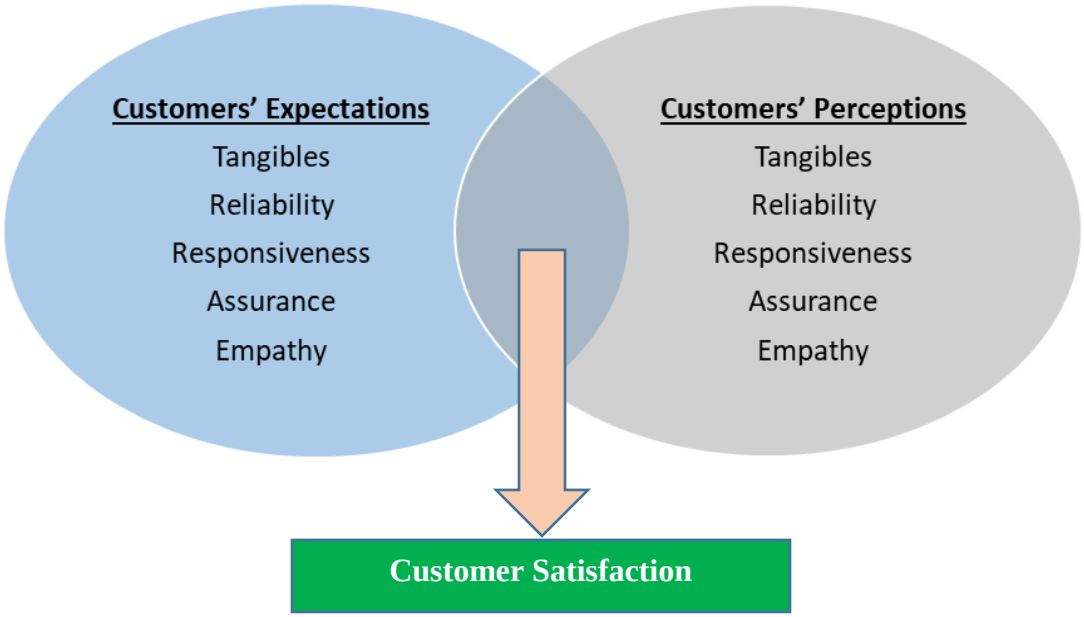
but few empirical studies have been carried using the SERVQUAL model to assess service quality in the electricity industry. This view was supported by Achchuthan, Sivathaasa and Jayasundra (2014) who allude that studies on service quality in the electricity sector have not been carried out and approached fruitfully in both developed and developing countries. There was no study found that investigated the impact of service quality on customer satisfaction of customer of an electric utility. Scholars who attempted to research on the subject at hand mainly assessed the attributes of service quality of the utility companies in their respective countries (Achchuthan et al., 2014; Odongo & Ngacho, 2015; Saini, 2018). Other researchers such as Chodzaza and Gombachika (2013) focused on the relationship between service quality and customer satisfaction among industrial customers.

Additionally, while there are few African scholars who have conducted research on service quality in the power sector; most researchers of service quality are from other continents. Specifically, there is no known study that has investigated the impact of service quality dimensions on customer satisfaction of electricity users in Namibia using the SERVQUAL model. Consequently, the present study would be a contribution to existing research on ESI of Namibia. There is no doubt a research gap exists in this field. In order to fill this void, the present study is an effort to measure the impact of service quality on customer satisfaction of NamPower residential customers using the SERVQUAL model from the customer's perspective.

2.9 Conceptual framework

A conceptual framework has been described by Habib (2014) as a map that presents the possible courses of action of the research idea by giving an indication about all possible steps of the research, and connecting the research activities. The conceptual framework for this study is shown in Figure 2.

Figure 2.2: Conceptual Framework



Source: Author's field work

2.10 Chapter Summary

This chapter reviewed the already existing relevant literature in the services sector and power sector specifically. The importance of service quality in the power sector is indisputable. Service quality is an area that has become the cornerstone of academic

interest as it is pivotal to customer satisfaction. Although there are a number of models and approaches of assessing service quality, the SERVQUAL model is one of the most widely accepted tool. The gap approach with its emphasis on the gap between the expectations of service and perceptions of service has also gained widespread acceptability in the current dispensation. This study employed a research instrument that is constructed as a questionnaire covering the five dimensions of the SERVQUAL model as outlined in the literature review above. The research gap indicating what has been studied in area of service quality and what remains to be investigated was also presented. The following chapter presents the methodology used in this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The preceding chapter presented a review of the existing literature with more focus on service quality and how it is measured using the SERVQUAL model. This chapter presents the research methodology employed for this study. Research approaches, designs and the research method used to collect the data will be discussed in this chapter. The chapter provides a brief overview of the literature on such research methodologies. Built on this analysis, the research methodology is justified by its suitability and practicality to achieve the research objectives. The research population, research sample, data collection methods, methods of analysis and research ethics are presented in this chapter.

3.2 Research Design

The present study used a survey research design to obtain information about the effect of quality electricity service delivery on customer satisfaction in the general consumer population in Otjozondjupa, Khoma, Omaheke, Hardap and Karas region. By employing a descriptive quantitative approach, the present study aimed to describe the state of NamPower services at present and establish the effect of the quality of services delivered by NamPower on customer satisfaction using quantitative data analysis techniques. Survey design is suitable to use when the researcher wants to determine individual opinions about issues or to identify important beliefs and attitude of individuals (Creswell, 2012). Thus, in survey design, the researcher administers a questionnaire to a small

number of people (sample) in order to identify trends in attitudes, behaviours, characteristics or opinions of a larger population (Cothari, 2004). Saini (2018b) posits that electric utilities, like other service organisations, depend on customer surveys to measure the quality of their services and customer relations. By conducting a survey, NamPower is able to efficiently get an insight into customers' thoughts, opinions and experiences; and transform feedback from customers into measurable quantitative data (Habib, 2014).

Specifically, the study used a web-based survey consisting of structured questions to collect primary data from respondents. Bakla, Cekic and Koksal (2013) argue that web-based surveys as data collection methods have become acceptable and reliable in recent years for conducting research. According to Fielding, Lee and Blank (2017), research indicates that web-based surveys collect data that can be compared in quality and type with data collected by conventional or paper-based surveys. A web-based survey was chosen for this study because it is suitable for targeting large and geographically scattered NamPower residential customers. Therefore, a huge amount of data can be collected from customers in a judicious amount of time and can be completed at the customer's convenience (Fricker, 2012). NamPower has e-mail addresses for all its residential customers which provide an easy means to contact a systematic sample from a closed population that can be completely counted. Furthermore, most of these customers have ready access to computers as most of them receive their electricity bills via e-mail and pay their accounts using internet banking; so customers have access to a Web-access instrument and browser. Therefore, under these conditions, a web-based survey has the potential to achieve responses in a reasonable time at a low cost.

3.3 Population

Creswell (2012) defines a population as a group of objects or people with similar characteristics. All NamPower customers who hold residential accounts in Otjozondjupa, Khomas, Omaheke, Hardap and Karas regions in Namibia were taken as the target population. According to Fricker (2012), a target population is the population of inference minus the group that the researcher chose to disregard. The researcher chose to disregard customers from other regions in Namibia because NamPower does not supply electricity directly to residential customers in those regions. Moreover, from the target population, there is a group of people which the web-based survey delimits, identify and subsequently allow access to; this is what is called a frame population (Fricker, 2012). Therefore, the frame population for this study is all residential customers of NamPower with active e-mail accounts. According to the company distribution department, as of February 2018, there were 2956 active e-mail accounts, and this is the population of the present study.

3.4 Sample

A sample is a subset of the population that the researcher intends to study for generalising about the population (Saunders, Lewis & Thornhill, 2009). Sampling is necessary as it is usually impossible or impractical to reach the whole population; this can be either due to cost or time constraints or any other practical constraints. However, the opinions expressed by those in the sample provided enough information for issues about the population to be addressed with some confidence. In the case of a random sample, the conclusions reached from the information provided by the sample can be generalised to the whole population. Even though there are different sampling techniques that can be

used, for example, single random, stratified random, systematic, quota, etc., this study employed a convenience sampling method. Therefore, only customers with active e-mail accounts were surveyed. In view of the time constraint and scattered customers, convenience sampling was chosen for ease of data collection (Saunders et al., 2009).

Other researchers of service quality have also used a convenience sampling method, for example, Ravichandran et al. (2010) who studied service quality by using the SERVQUAL instrument had a sample of 300; Khan and Fasih (2014) collected data from 319 bank customers in their study of impact of service quality on customer satisfaction and loyalty in the banking sector. Pakistan and Selvakumar (2015) also employed the convenience sampling method for data collection from public and private sector in Coimbatore, India. Although the use of this type of non-random sampling method may be questioned about its generalisability, it can be theoretically defended via literature that it has served the research objectives.

Applying Yamane's (1967) simplified formula to calculate sample sizes, a sample size of 353 was required for the study as shown below.

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{2956}{1+2956(0.05)^2} = 352.32$$

Where *n* is the required sample size, *N* is the population size and *e* is the sampling error. A 95% confidence level was assumed for this formula to determine the sample size, at *e*=0.05. Therefore, the sample size for the present study was 353 residential customers of NamPower. In order to improve the response rate, the survey was sent to all residential

customers with an e-mail address, which represents the sample frame for this study. Fricker (2012) suggests that with web-based, rather than sending out questionnaires to a sample, it is more effective to simply send out questionnaires to the entire sampling frame. The first 353 customers who opted to respond and completed the survey made up the sample of the study.

3.5 Research Instruments

The study used an online questionnaire that was developed from the SERVQUAL model of Parasuraman et al. (1985, 1988) to collect primary data. The SERVQUAL instrument was used by Ravichandran et al. (2010), Satapathy (2014) and Saini (2018), was also adapted for this study as the measurement tool for service quality. The survey was created on the internet with the help of Google Forms survey tool. A replica of this web-based questionnaire can be found in Appendix B. The original SERVQUAL questionnaire was modified to suit the Namibian electricity supply industry context and loaded on Google forms. The questionnaires were administered to residential customers of NamPower in Otjozondjupa, Khomas, Omaheke, Hardap and Karas regions in Namibia.

The online survey consisted of four sections. Section one and two provided brief introduction to the survey and gathered demographic information of respondents such as gender, age, education and occupation respectively. Section two and three included questions to measure the customers' expectations and perceptions respectively. In section three customers were asked to rate 22 attributes/statements that would measure their expectations of the services provided by an ideal electricity distribution company. They

were then asked to rate another similar set of 22 statements that would measure their actual perception of the services delivered to them by NamPower in section four. A five-point Likert scale was used to measure the items on the questionnaire, where 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree. This design was appropriate because the Likert scale has been used adequately to study a cluster of attitudes (Creswell, 2012).

3.6 Procedures

3.6.1 Primary Data Collection

The present study used e-mail as the contact mode to invite customers to take part in the survey that was sent to all NamPower residential customers with active e-mail addresses. Customers were asked to complete and submit the survey online (response mode). The follow-up mode was also via email whereby two reminders were sent out to customers; the first reminder two weeks after the initial invite was sent and the final reminder a week before the survey was closed. An e-mail with the Google Form embedded in the mail (Liu & Inchausti, 2017) was sent on September 14, 2018 (round 1), and reminders with the same content as the initial e-mail were sent on September 28 (round 2) and October 5 (round 3) (see Appendix A). Salim, Peng, Almaktary and Karmosh (2017) used the same procedure in the study on the impact of citizen satisfaction with government performance on public trust in the government in Yemen. In total, some 2956 emails were sent inviting customers to partake in a research project. The customers were instructed to choose the single most appropriate response and the questionnaire allowed only one answer per question, and one could not carry on with the survey if one question or more were left

answered. Additionally, respondents were limited to one response per customer only. Three weeks after the final email reminder was sent, the survey was closed. Responses were subsequently automatically saved in an electronic format by Google Form, which makes it easy to import the data to Statistical Package for Social Science (SPSS) and Microsoft Excel software for analysis purposes. The responses were kept confidential.

3.6.2 Secondary Data Collection

An extensive review of the literature was carried out to collect secondary data for the current study in order to have a firm understanding of the service quality and customer satisfaction construct; and how the SERVQUAL model can be used to measure service quality. Books, electronic and printed journals, websites, newspapers, government reports, unpublished master's theses, and NamPower reports and ESI publications were used to collect data relevant to the study. An in-depth desk study was necessary to develop an understanding of the concepts of service quality and customer satisfaction. In this context, scholarly online journal sites such as Emerald, Research Gate, EBSCOhost and Google Scholar were browsed frequently. Apart from this, the library of the University of Namibia and that of Namibia University of Science and Technology provided more literature on the topic under study.

3.6.3 Pilot Study

A pilot study is defined as a replication and trial of the main survey; as such improvement (if any) can be effected on questionnaires (Kothari, 2004). A pilot study of 10 respondents was conducted before the actual survey to assist the researcher to make necessary

adjustments and corrections in the questionnaire. This group of respondents contains NamPower employees, customers and fellow MBA researchers who completed the survey under the observation of a researcher. This was necessary to ensure questionnaire completeness, relevancy, efficiency, and format appropriateness as well as to ascertain whether the questions in the questionnaire were clear enough for the customers to understand and whether the answers they provided would be expected to achieve the research objectives. This was deemed necessary because the SERVQUAL questionnaire was developed and tested on research samples that are not from Namibia. The pilot study was also necessary to thoroughly test the web-based survey used to collect data. With computers and smartphones, there are always of various, and often unpredictable, hardware and software incompatibilities. Therefore, it is crucial to carefully pre-test any online survey instrument. This pretesting included testing the survey on different computers and smartphones (android vs iOS) with different browsers, including early and later versions of Internet Explorer, Firefox, Netscape, Google Chrome, etc. Analysis of the data from the pilot also provided an indication of the validity and reliability of the questionnaire.

3.7 Data Analysis Procedures

3.7.1 Data Analysis

According to Creswell (2012), quantitative data analysis involves preparation for data analysis by assigning and assessing scores to use, selecting statistics software, conducting descriptive and inferential analysis, reporting and presenting the results using tables, graphs and a discussion of the key results. Quantitative data were analysed using

descriptive statistical analysis using the Statistical Package for Social Science (SPSS) 18.0 and Microsoft Excel 2013 software. So, the first step was to import data from Google Forms to Excel and SPSS, and inspect for incorrect entries and missing data.

The researcher implemented the SERVQUAL method of analysis (Parasuraman et al., 1988, 1991) for each criterion and the quality gap was computed accordingly. Parasuraman et al. (1988) and other SERVQUAL scholars confirm that when the customer expectation of service is greater than the customer perception of service, service quality will be perceived as being less and less than satisfactory as the difference (gap) between customer perception and customer perception increases. When customer expectation is equal to customer perception, quality is satisfactory; and when customer expectation is less than customer perception, quality will be more and more satisfactory as the gap between customer perception and customer perception increases. Therefore, Excel was used to capture respondents' expectation and perceptions scores of each SERVQUAL item, and to perform a gap score analysis to compare customers' expectations with their perceptions of the service delivered. The mean score of responses was used to analyse the effect of the dimensions of service quality on customer satisfaction using descriptive statistics. Furthermore, tables, graphs, frequencies and percentage distribution were used to summarise and present data collected from respondents. Finally, results from data analysis were interpreted accordingly by summarising them, comparing the results with past literature, advancing the limitations of the study (Creswell, 2012). Recommendations and suggestions for future research were also provided.

3.7.2 Reliability and Validity

Field and Miles (2010) describe validity as the ability of a measurement instrument accurately measuring what it is designed to measure and reliability is the ability of measurement instrument in consistently arrive at same results under same situations. For validity analysis, a series of exploratory factor analysis were performed by various researchers to refine the measurement scales, assess their validity and evaluate its applicability. Cronbach (1951) came up with the most common measure of questionnaire scale reliability called Cronbach's alpha, α. Therefore, the SERVQUAL scale and the internal consistencies of the five dimensions as suggested by Parasuraman et al. (1988) for this study was tested using Cronbach's alpha coefficient values. Cronbach's alpha is a technique which is based on calculating the averages or mean for reliability coefficient for all the possible way of dividing an item into two halves for each dimension using data on perceptions, expectations and the differences (gap) between the expectations and perceptions (Leedy & Omrod, 2014). SPSS was used to evaluate the Cronbach alpha for the reliability analysis process and to test the reliability of the scale value using mean value.

3.8 Research Ethics

To ensure that ethical issues are addressed in this study, the researcher sought and obtained permission to use NamPower data and have access to NamPower residential customers from the Manager of Organisational and Human Resources Development of NamPower before the study was conducted (see Appendix D). This was done in conjunction with a letter from Namibia Business School (NBS) of the University of Namibia explaining the

purpose of the study and seeking permission to conduct this research (Appendix C). All information gathered will be kept confidential and secured by complying with the provision of the Republic of Namibia Protection of Information Act 84 of 1982. Therefore, the researcher will store analysed data at secured place for a period of 5 years. After that all the data will be destroyed by physically destroying the hard drive. Confidentiality was ensured and guaranteed through anonymity of all participants. This was clearly explained in the invitation email that was sent to respondents to obtain their consent to voluntary take part in this study. Finally, the concepts, ideas and theories borrowed from secondary sources have been appropriately acknowledged.

3.9 Chapter Summary

This chapter has outlined the research approach, design and strategies that were followed to attain the objective of the study. The researcher also explained how the pilot survey was conducted for the preliminary analysis. A brief review of the literature on research methodologies was also presented. The research methodology is justified by its suitability and usefulness in order to attain the research objectives. Finally, an explanation of research ethics is presented. The next chapter presents the analysis of data, findings and the discussion.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Introduction

The preceding chapter explained the research approach, methods, design and instruments used for data collection and data analysis. The aim of this chapter is to present the analysis and results of the study based on descriptive and inferential statistics in line with the aims and the objectives of the study. The main objective of the study was to evaluate the impact service quality dimensions on customer satisfaction of NamPower residential customers. A web-based survey (questionnaire) comprising structured questions was used to collect data from NamPower residential customers. Hence, this chapter presents the description and critical analysis of the data collected from NamPower residential customers as well as the discussion of the results in relation to past literature and research objectives.

4.2 Response Rate

The sample of this study was 353 residential customers of NamPower who used electrical services in Otjozondjupa, Khomas, Omaheke, Hardap and Karas regions in Namibia. A web-based (online) survey was used to collect data from respondents. Response rates from internet-based surveys are expected to be low, and there are usually issues of non-response bias as the respondents are mostly sceptical to complete online questionnaires (Saunder, 2009). Out of 2956 emails that were sent out to customers inviting them to participate in the survey, only 338 responses were received. Overall, this translates into 11% response rate. The sample of the study was 353 customers, hence, 338 responses represent 96% of

the sample. The impact of the lost data (4%) was trivial to affect the overall results of the study. Bakla et al.'s (2013) sampling strategy of sending out the survey to all customers with active e-mail addresses was effective in this regard. Therefore, 338 responses depict a representative sample from which the findings of the study can be generalised to the whole of NamPower residential customers. Due to the nature of the web-based survey used for the study, all 338 responses received were valid.

4.3 Demographic Characteristics of the Respondents

4.3.1 Gender

Table 4 presents the gender composition of the sample. Men and women react differently to services and so an equal representation in the sample was desirable for a balanced view of the quality of services provided by NamPower. After data collection, it was observed that the sample consisted of 72.8 per cent male (246) and 27.2 per cent female (92) respondents. Ideally, for gender balance, the proportion of female in the sample should be the same as that of male, but this was not the case.

Table 4.1: Demographic Information on Gender

Gender	Number of Respondent	Percentage (%)
Male	246	72.8
Female	92	27.2
Total	**338**	**100**

Source: Author's fieldwork (2018)

This can be explained by the fact that many of these respondents were commercial farmers and it was reported that only 28 per cent of women owned commercial farmland and

communal land rights in Namibia (Shapwanale, 2018). Based on these results, it can be concluded that the majority of NamPower residential customers are men.

4.3.2 Age Groups

Respondents were asked to provide information of which age group they belonged to. Age information is useful to NamPower for planning services both for the current period and for the future. The results are presented below in Table 2. The analysis of age category data indicated that the majority of the respondents (i.e. 41.4 per cent) belonged to the age group of 41 - 50 years, followed by the age group of 51 – 60 (27.2 per cent). This might be due to the fact that these age groups are for adults and residence owners who are responsible for running households and account for electrical services. When compared to the young ones, adults who are the electricity account holders tend to be more judgmental of the service by comparing what they receive with what they expected from the utility company. Adult customers would want to get the best value for the amount of money that they spend on electricity. The third highest age group is the 31-40 years age group, which constitutes 13.9 per cent of the total respondents. The age group of 21 - 30 years comprised 10.1 per cent share of sample respondents in the overall study. The rest of the respondents are from the pensioner age group, which constitutes the remaining 7.4 per cent of total respondents.

Furthermore, it is also not surprising that the lower percentages represented pensioners and those under the age of 30. Many pensioners are no longer responsible for electricity accounts. Most young people under 30 are usually recent graduates and those who have

just started working. Most of them are still living with parents away on farms and are not responsible for handling electricity accounts. It was also fascinating to observe that within the age group of 41 - 50 years, male respondents (frequency 101) are more than twice the female respondents (frequency 39). Male respondents were also dominant in the 51 - 60 years, 31 - 40 years and in the pensioner age category. Women only managed to dominate in the age group of 21 – 30 years. The age category data indicated that most of the respondents (41.4 + 27.2 + 7.4 = 76 per cent) are over the age of 40 years. Only 24 per cent of respondents were below the age of 40 years. This reveals that many young people of Namibia were excluded from commercial farming activities that were associated with the electricity accounts of the respondents, and therefore, could have an opinion regarding the quality of electrical services.

Table 4.2: Demographic Information on Age

Age Group	Female	Male	Total	Percentage %
21-30	19	15	34	10.1
31-40	12	35	47	13.9
41-50	39	101	140	41.4
51-60	17	75	92	27.2
Pensioners	5	20	25	7.4
Total	**92**	**246**	**338**	**100**

Source: Author's fieldwork (2018)

4.3.3 Educational Background of Respondents

The current educational status of the respondents is shown in Table 4. The highest level of education, which was a post-graduate qualification, was found to be 12.7 per cent of

the respondents. The majority of the respondents had a post-high school qualification (55.9 per cent), followed by a Grade 12 certificate (26.9 per cent). Only 12. 7 per cent of the respondents had a Grade 10 certificate. This indicates that all respondents were literate and had no difficulties reading and understanding the questionnaire used for the study. Moreover, the level of education has a significant impact on customer expectations and perceptions regarding the quality of services they receive from electricity utility companies. For instance, an educated population is likely to have high expectation regarding the service quality of the service provider; less educated people may become satisfied only with the availability of electricity.

Table 4.3: Demographic Information on Education

Education	Female	Male	Total	Percentage (%)
Grade 10	4	11	15	64.4
Grade 12	20	71	91	26.9
Graduates	57	132	189	55.9
Post Graduates	11	32	43	12.7
Total	**92**	**246**	**338**	**100**

Source: Author's fieldwork (2018)

4.3.4 Employment Population

Table 5 depicts the type of occupation of the respondents. From the analysis, it shows that most of the respondents (35.8 per cent) were working for the private sector while 25.7 per cent were self-employed. The results further show that respondents who were working for the government made up 20.4 per cent of the sample respondents and the remaining 16.3

per cent were unemployed. The unemployed occupation group comprised mostly the 21-30 year's group (49 per cent) with a post-high school qualification; this can be explained by the high youth unemployment rate that exists in the country. Nonetheless, from the occupation data, it can be observed that the majority of the respondents (83.7 per cent) were employed.

Table 4.4: Demographic Information on Occupation

Employment Data	Female	Male	Total Gender	Percentage %
Unemployed	19	50	55	16.3
Self-Employed	24	97	93	27.5
Government Employee	27	66	69	20.4
Private Sector	22	33	121	35.8
Total	**92**	**246**	**338**	**100**

Source: Author's fieldwork (2018)

4.4 Validity and Reliability

4.4.1 Validity Test

The questionnaire that was used to collect data for this study is the renowned SERVQUAL instrument that was slightly modified as per Parasuraman et al.'s (1985, 1988) suggestion. It can be observed from the literature review (Chapter 2) that the SERVQUAL instrument has been tested and approved for both its content and construct validity. The test for the content validity included a critical review of the literature on the SERVQUAL model and pilot testing (see section 3.6.3). The construct validity test was conducted by evaluating all the five dimensions of SERVQUAL for its reliability and for the goodness of it to the present study. Results for reliability tests are presented in the next section.

4.4.2 Reliability Test

The internal consistency of the SERVQUAL instrument that was used to collect data for the study was checked by computing the Cronbach coefficient alpha. According to Creswell (2012), when the questionnaire items are scored as continuous variables (for example, 'strongly agree' to 'strongly disagree'), the Cronbach coefficient alpha provides a good estimate of the consistency of scores on the questionnaire. This method of testing the reliability of the research instrument was also recommended by the original developers of the SERVQUAL model (Parasuraman et al., 1985, 1988). For the questionnaire to be considered valid, Cronbach alpha value should be more than 0.70 (Saunders et al., 2009). For the present study, Cronbach's alpha value has been calculated for all five dimensions of service quality for both customer expectations and perceptions as presented in Table 6.

Table 4.5: Assessment of reliability of the SERVQUAL questionnaire

Dimensions	No. of Items	No. of Respondents	Cronbach's α	
			Expectations	Perceptions
Tangibility	4	338	0.93	0.97
Reliability	5	338	0.89	0.94
Responsiveness	4	338	0.93	0.97
Assurance	4	338	0.90	0.91
Empathy	5	338	0.95	0.97
Overall Cronbach's alpha	**22**	**338**	**0.92**	**0.95**

Source: Author's fieldwork (2018)

It can be observed from Table 6 that all SERVQUAL dimensions under expectations and perceptions have Cronbach's alpha value above the recommended value of 0.70. The

overall reliability coefficient for the SERVQUAL instrument used for the study is 0.92 on the customer expectations scale and 0.90 on the customer perceptions scale; therefore, indicating a very high level of reliability. This indicates that reliability coefficient values are approximate to that reported in Parasuraman et al. (1985) and consistent with that of Chodzaza and Gombachika (2013), Achchuthan et al. (2014) and Saini (2018a). Thus, the survey instrument used in this study is considered valid for carrying out this research and collecting reliable data for further analysis.

4.5 Analysis of Customer's Expectation and Perceptions of NamPower Service Quality

This section of the analysis assesses the mean and standard deviation of expectations and perceptions of NamPower residential customers in line with the first objective of the study. The statements on expectations and perceptions were both measured on the 5-point Likert scale, whereby 5 indicates the highest level of expectation or perception and 1 the lowest level of expectation or perception as judged by respondents. When presenting and analysing expectation scores, it is logical to concentrate more on attributes or items that scored the highest because these are the attributes that NamPower customers value the most. When analysing perception scores, it is rational to ponder on attributes or items that score the lowest because these are the attributes that customers are most dissatisfied with and where NamPower should pay special attention to. Even though the SERVQUAL questionnaire used to collect data had a separate section on expectation and one on perception, the researcher opted to present in this section both expectations and perceptions results for each statement and the five dimensions together, in order to provide

a better and clearer prospect of the data collected. Henceforth, the mean and standard deviation of the 22 items of the SERVQUAL Model measuring customer's expectations and expectations was statistically analysed and simultaneously presented in the following section.

4.5.1 Tangibility Dimension

Tangibility dimension was about the appearance of NamPower buildings, power lines, electrical machines, office space, staff, printed and visual materials. Table 7 illustrates that when measured on the 5-point Likert scale, all 4 attributes under tangibility have a mean expectation score above 4. The mean customer expectation score of tangibility was between 4.343 and 4.382 with the standard deviation between 0.640 and 0.735. The standard deviation indicated how the attribute scores were spread away from their respective mean values. In terms of expectation, out of the 22 attributes of service quality, attribute 2 within the tangibility dimension recorded the highest standard deviation of 0.735 meaning that respondents' views across different gender, age groups, occupations and educational status differ to a large extent. This indicates that some customers expect NamPower to have well managed offices while some do not really emphasise this attribute.

An expectation above 4 is considered very high; therefore, NamPower customers have a very high expectation regarding the dimension of tangibility. The mean customer perception score on tangibility was between 3.210 and 3.219 with the standard deviation between 0.837 and 0.858. This means that customers have a slightly more than moderate

perception; their perception is not very low and it is neither high. Regarding all four statements on tangibility, it can further be observed from Table 7 that the mean expectation scores were greater than the mean perception scores for all items within the tangibility dimension.

Table 4.6: SERVQUAL scores for Tangibility dimension

No	Tangibility Statements	Expectation (E)		Perception (P)		Gap Scores (P-E)
		Mean	SD	Mean	SD	
1	Modern looking equipment	4.343	0.731	3.210	0.848	-1.333
2	Well managed offices	4.348	0.735	3.219	0.858	-1.129
3	Employees are well dressed	4.361	0.701	3.213	0.837	-1.148
4	The records of electricity connection, bills and meter, etc. are maintained properly	4.382	0.640	3.216	0.841	-1.166

Source: Author's fieldwork (2018)

Attribute 4 which asks whether the electricity consumptions records such as bills and power meter are well maintained had the highest mean score (4.82) on expectation, and on perception, attribute 2 states that NamPower offices are well managed, had the highest mean score of 3.219 indicating that customers felt that offices of NamPower were well maintained and that they were appealing to customers. Previous studies which are in agreement with expectation assessments are those of Chodzaza and Gombachika (2013); Aggarwal and Kumar (2018) and Saini (2018d). These studies indicate that customers put more emphasis on the maintenance of their electricity account records and power meters so that they can always yield accurate readings of the electricity consumed.

For both expectation and perception, the lowest attribute in this dimension is the item assessing the modernity of NamPower equipment with mean scores of 4.343 and 3.210 respectively. Although these scores were different from some published studies (Saini, 2018d), they were consistent with those obtained by Aggarwal et al. (2018) from their study on the examination of service quality dimension in the power distribution sector. Moreover, residential customers of NamPower showed high expectation regarding the dressing code of office employees and technicians (M=4.348). The customers also expected the company's offices to be well maintained (M=4.348). In the same vein, customer's perception regarding the dressing code of NamPower personnel recorded a mean score of 3.213 while the attribute of well-maintained records recorded a mean score of 3.216.

4.5.2 Reliability Dimension

The reliability dimension measured the ability of NamPower to perform the promised electrical services accurately and dependably. Once more, as it can be seen from Table 8, for all five statements on reliability, the mean expectation scores were greater than the mean perception scores.

Table 4.7: SERVQUAL scores for Reliability dimension

No	Reliability Statements	Expectation (E)		Perception (P)		Gap Scores (P-E)
		Mean	SD	Mean	SD	
5	Electricity services are supplied at the promised time	4.145	0.640	3.033	0.816	-1.112
6	Shows sincere interest in solving customer problems	4.204	0.647	3.009	0.824	-1.195
7	Fixes electrical faults correctly on the first time	4.139	0.655	3.012	0.815	-1.127

8	Provides correct estimated time of supply restoration	4.139	0.681	3.006	0.826	-1.133
9	Power meter readers honestly record correct reading from the meter	4.376	0.638	3.441	1.144	-0.935

Source: Author's fieldwork (2018)

The mean customer expectation score of reliability was between 4.139 and 4.376 with the standard deviation between 0.640 and 0.681. These results indicated that the residential customers expected a reliable supply of electricity from NamPower at all times. The mean customer perception score of reliability was between 3.441 and 3.006 with the standard deviation between 0.815 and 1.144, indicating that customers had an average perception regarding the reliability of the electricity supplied by NamPower and other supporting services.

It can be observed that for both expectation and perception, attribute 9, which relates to the statements of the correct recording of electricity meter readings and correct calculating electricity bills, had the highest mean score. This shows that most respondents expected to receive their electricity account bills without error (M=4.376). It was also interesting to observe that perception responses were relatively high (M=3.441) on this attribute, which means that NamPower was doing a fairly satisfactory job regarding meter readings and records management. Comparing these results with past literature, was in alignment with previous studies by Aggarwal et al. (2018) and Saini (2018d), who also found error-free records attribute to be the highest expected and perceived attribute within the reliability dimension. Regarding expectation, the attributes with the lowest mean scores were attributes on whether NamPower fixes electrical faults correctly on the first time and whether it provides a correct estimated time of electricity supply restoration (M=4.139 for both attributes), which demonstrates that these two attributes were equally important to

customers. On the other hand, the attribute with the lowest perception mean score on reliability was attribute 8, indicating that customers felt that NamPower did not provide a correct estimate of time they will restore the power after an interruption (M=3.006). Similarly, customers perceived that NamPower employees did not show sincere interest in solving their problems (M=3.009); this can be related to attribute 7 where customers perceived that NamPower did not always fix electrical faults correctly on the first time (M=3.012).

4.5.3 Responsiveness Dimension

Responsiveness dimension assessed the willingness of NamPower to assist customers and provide service without hesitation. Descriptive statistics of customer expectations and perceptions regarding the responsiveness dimension are presented in Table 10.

Table 4.8: SERVQUAL scores for Responsiveness dimension

No	Responsiveness Statements	Expectation (E)		Perception (P)		Gap Scores (P-E)
		Mean	SD	Mean	SD	
10	Inform exactly when services will be performed	4.314	0.669	3.062	0.833	-1.252
11	Employees quickly respond to customers' complaints	4.376	0.683	3.151	0.853	-1.225
12	Always be willing to help customers	4.349	0.669	3.083	0.826	-1.266
13	Never too busy to respond to customers' requests	4.402	0.666	3.148	0.866	-1.254

Source: Author's fieldwork (2018)

The mean customer expectation scores of responsiveness were between 4.314 and 4.404 with the standard deviation between 0.683 and 0.669, indicating that the residential

customers had a very high expectation as far as the responsiveness dimension is concerned. The mean customer perception scores on responsiveness were between 3.151 and 3.062 with the standard deviation between 0.826 and 0.866. These indicate an above moderate level perception similar to that of dimensions presented in the preceding sections.

In terms of expectations, it can be noted from Table 9 that the highest mean score come from attributes 13, showing that respondents highly expected NamPower service employees to never be too busy to respond to customers' requests and queries (M=4.402). Closely related to attribute 13 is an item stating ‘employees quickly respond to customers’ complaints’ which scored the second highest mean in this dimension (M=4.376). These results are consistent with results reported in Singh et al. (2016) for the electric utility company in Haryana, but they are different from the results reported in Aggarwal et al. (2018) for a distribution company in India which rated higher expectation on attribute 12. Electricity is an essential necessity to many people, so when there is a problem with electricity, customers expect prompt services. They should not spend too much time waiting in queues waiting for services; employees should always be willing to help customers (Sharma, 2010).

Regarding perceptions of responsiveness, the lowest ranked attribute was 10 which requires NamPower to inform their residential customers exactly when a particular service will be performed (M=3.062). When a customer applies for a new electricity meter board or to upgrade their power transformers, most customers perceive that NamPower barely informs customers of when precisely that work would be performed. Remarkably, none

of the studies reviewed had agreed with these results as many of them reported that customers are more concerned about the ability of employees to quickly respond to customers' complaints and queries (Saini, 2018d, Aggarwal et al., 2018).

4.5.4 Assurance Dimension

The assurance dimension assessed the knowledge and politeness of NamPower personnel and their ability to inspire confidence and trust in residential customers. It also comprised the safe use of electricity, secured transactions and privacy in dealing with electricity accounts of customers. For all four items on assurance, the mean expectation scores were greater than the mean perception scores, as can be seen in Table 10.

Table 4.9: SERVQUAL scores for assurance dimension

No	Assurance Statements	Expectation (E)		Perception (P)		Gap Scores (P-E)
		Mean	SD	Mean	SD	
14	Employees behaviour instil confidence in customer	4.328	0.690	3.115	0.823	-1.213
15	Feel safe using electricity	4.464	0.626	3.654	1.174	-0.810
16	Employees are polite with customers	4.328	0.711	3.124	0.806	-1.204
17	Expertise and knowledgeable staff available to resolve customer problems	4.308	0.719	3.160	0.884	-1.148

Source: Author's fieldwork (2018)

The mean customer expectation scores of assurance was between 4.308 and 4.464 with the standard deviation of between 0.626 and 0.719, indicating that assurance was one of the most dominant dimensions of NamPower service quality. Customer perception scores

of assurance dimension was between 3.115 and 3.654 with the standard deviation between 0.806 and 1.174; this shows that customers had a moderate to high perception regarding the assurance attributes of NamPower service quality. In terms of expectations, out of the 22 attributes of service quality, attribute 15 within the assurance dimension recorded the lowest standard deviation of 0.626 meaning that respondents' views regarding electricity safety were almost the same. However, the same attribute had the highest standard deviation (1.174) in terms of perceptions. This is due to the fact that there are customers who might have felt that electricity safety is the responsibility of users and not that of NamPower.

Attribute 15 which incorporates electrical safety had the highest scores both for expectation and perception with mean scores of 4.464 and 3.654 respectively. The findings of these attributes on assurance are in support with previous studies on service quality in the power sector (Achchuthan et al., 2014; Odongo & Ngacho, 2015; Saini, 2018). It is crucial for customers to feel safe when using electricity at all times, hence the high expectation from customers in this regard. Despite high expectation, it is commendable to see that customers also have a high perception regarding electrical safety attribute, showing that customers felt safe using electricity from NamPower. The lowest perception rating come from attribute 1, indicating that the behaviour of NamPower employees does not really instil confidence in customers. In terms of expectations, attribute 17 has the lowest mean (M=4.308) indicating that there are few customers who did not really expect all employees to be experts at their job.

4.5.5 Empathy Dimension

The empathy dimension evaluated the individual and undivided attention that NamPower service personnel provided to their customers. Although for all five statements on empathy the mean expectation scores were also greater than the mean perception scores, it can be observed that attributes within the empathy dimension received the lowest scores for both expectation and perception compared to other four dimensions of service quality. This indicates that the majority of respondents did not really expect separate care or individual attention from employees. All they cared about was the continuity and security of electricity supply to be satisfied. Since data for this study were collected via online, it simply pointed out that the majority of respondents hardly had physical contacts with employees of NamPower. They did most of their transactions online where no separate care or individual attention is necessary.

Table 4.10: SERVQUAL scores for Empathy dimension

No	Empathy Statements	Expectation (E)		Perception (P)		Gap Scores (P-E)
		Mean	SD	Mean	SD	
18	Employees personally attend the customers for their complaints and queries	4.095	0.704	2.950	0.786	-1.145
19	Are operating hours suitable to customer's needs?	4.136	0.680	3.038	0.869	-1.098
20	Knows and understands customers particular needs	4.115	0.673	2.953	0.799	-1.162
21	Resolves customers' complaints	4.166	0.678	2.988	0.875	-1.178
22	Company motivates the customers to save electricity	4.112	0.688	2.941	0.791	-1.171

Source: Author's fieldwork (2018)

The mean customer expectation score of empathy was between 4.095 and 4.166 with the standard deviation between 0.673 and 0.704, and customer perception score was between 2.941 and 3.038 with the standard deviation between 0.875 and 0.799. In terms of perception, the lowest standard deviation of 0.786 was recorded from attribute 18 within the empathy dimension, meaning that respondents' opinions regarding this attribute were almost the same irrespective of their demographic profiles. The full results of empathy attributes are presented in Table 11.

Nevertheless, it can be noted that attribute 19 was deemed to be the most important attribute to customers within the empathy dimension as it had the highest mean score expectation (M=4.166), indicating that most respondents expected NamPower employees to effectively resolve their complaints and queries. The reason might be that when a customer has a problem or query, he or she expects employees to have an explanation or answers to such questions, which might not be the case with employees of NamPower. Although these results of empathy attributes differ from some published works (Tsoukatos et al., 2010), they are consistent with those obtained by Abili et al. (2010) and Yingbao and Li (2011) in their study of measuring service quality in the power sector using the SERVQUAL model. On the other hand, the attribute with the lowest perception mean score on empathy was attribute 22 (M=2.941), showing that most customers felt that NamPower service employees did not put more effort in engaging and motivating their customers to exercise electricity saving measures. These findings are in agreement with those obtained by Sangeetha and Mahalingam (2011) as well as those of Khan and Fasih (2014).

4.6 Average Means Scores of Customer's Expectations and Perceptions

The overall expectation and perception mean scores of service quality of NamPower was assessed using the SERVQUAL model on five dimensions, namely, tangibility, reliability, responsiveness, assurance and empathy. The results of the analysis are shown in Table 12.

Table 4.11: Overall Mean Scores of NamPower Service Quality Dimensions

Dimensions	Expectation		Perception		Gap
	Mean	SD	Mean	SD	
Tangibility	4.359	0.702	3.215	0.846	-1.144
Reliability	4.201	0.652	3.100	0.885	-1.101
Responsiveness	4.360	0.672	3.111	0.845	-1.249
Assurance	4.357	0.687	3.263	0.922	-1.094
Empathy	4.125	0.685	2.974	0.824	-1.151
Overall service quality score	**4.280**	**0.660**	**3.133**	**0.865**	**-1.148**

Source: Author's fieldwork (2018)

Table 12 shows that the mean values for the expectation variables ranged between 4.125 for empathy and 4.360 for responsiveness. The overall expectation score for NamPower service quality was 4.280, which is 'high'. These findings suggest that, though NamPower was operating in a monopolistic market, customers still had high expectations of its service quality. This is normal because naturally, people expect the best from other people. However, mean perception scores of service quality of NamPower was only between 2.974 for empathy and 3.263 for assurance, with an overall score of 3.133.

Although the overall perception score was not very low, it was neither high, meaning on average respondents chose neutral for many statements on the perception section of the questionnaire. This moderate score indicated that customers did not experience excellent

quality of service from NamPower. Respondents' perception of the actual service quality was below that of their expectation resulting in poor service rating in all five dimensions consistent with results reported in Chatzoglou et al. (2013) for public sector services, Cheruiyot e al. (2013) for university services, Chodzaza and Gombachika (2013) as well as Saini et al. (2018) for electric utilities services. Therefore, service employees of NamPower need to do a lot to improve the quality of service provided so as to meet the expectations of customers. Furthermore, the results indicated that the overall standard deviation of mean expectation of NamPower service quality is 0.660 and that of perception is 0.865. The mean standard deviation of the perception scores was greater than the mean standard deviation of the expectation scores for the reason that perception of service quality usually differs between persons since performance of services often differs from one provider to another, from customer to customer, and from day to day (Zeithaml, at al., 2006).

Further analysis revealed that the respondents' expectations were highest on the responsiveness dimension (M=4.360), indicating that this is the most important service quality dimension for most respondents. This was followed by tangibility dimension with a mean expectation score of 4.359. The lowest or smallest disappointment was within the empathy dimension (M=4.125) followed by reliability dimension with a mean expectation score of 4.201. The reason for low expectation scores within the empathy dimension was due to lowest expectation that most respondents had in demanding NamPower employees to personally attend to customers queries and complaints (M=4.095), and low expectation in the ability of NamPower technicians to fix electrical faults correctly on the first time and provide correct estimated time of supply restoration after an outage (M=4.139 for both

attributes). On the other hand, the respondents' perception of NamPower service quality was lowest within the empathy dimension (M=2.974) and highest in assurance dimension (M=3.263). The highest expectations mean scores originated from safety aspects of electricity within the assurance dimension (M=4.464), well maintained electricity meter in the tangibility dimension (M=4.382) and customer service issues of the responsiveness dimension that expect employees to be 'never too busy to respond to customers' requests' (M=4.402).

The high expectation in such attributes is quite natural because nowadays electricity is an essential service to the majority of people. Therefore, many customers do not expect any power interruption, and when it happens they expect quick response and restoration of power (Satapathy et al., 2014). In addition, customers expect their electricity meters to be well maintained so they can take accurate readings, they expect employees to be at their disposal, and they expect electricity to be safe. Likewise, the highest contributor to the perception scores was the assurance dimension, specifically 'Feeling safe using electricity' (M=3.654) attribute indicating that customers somehow felt safe using NamPower electricity. However, regarding empathy dimension, residential customers have a poor experience dealing with NamPower as this is the only dimension that scored a mean value below 3 on the 5- point Likert scale.

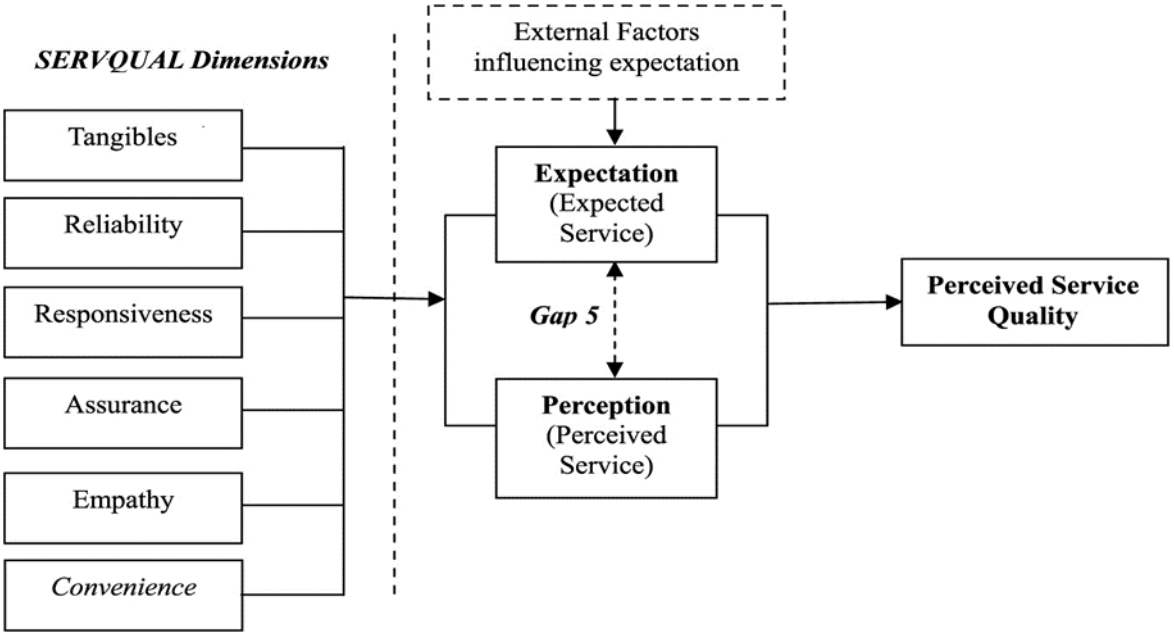
Moreover, it can be observed from Table 12 that regarding expectations, tangibility dimension had the highest standard deviation of 0.702 indicating that respondents' views differed to a large extent. Reliability dimension had the lowest standard deviation (0.652) showing that the respondents' views were almost the same. In terms of perceptions,

assurance dimension had the highest mean (0.922) showing that respondents' view differed to a larger degree and that empathy dimension had the lowest mean (0.824) meaning that the respondents' views were almost the same.

4.7 Gap in Expectation and Perception of NamPower Service Quality

The second objective of this study was to analyse the discrepancy gap in expectation and perception of customers towards the service quality of NamPower. Customers' appraisal of service quality relies upon the gap between the expected and perceived service as shown in Figure 3.

Figure 4.1: Measuring service quality using SERVQUAL model



Source: Kumar et al. (2009)

Therefore, the gap scores were calculated by subtracting expectation from perception mean scores (Parasuraman et al., 1985; 1988; 1991). Thus, in order to achieve service

excellence, NamPower should manage service quality by minimising the gap customer expectations and customer perceptions. The gap scores for all 22 service quality attributes are displayed in Table 14. The results clearly showed that there were significant gaps between respondents' expectations and perceptions for all attributes of service quality ranging from -0.81 to -1.333 in agreement with results obtained by Chodzaza and Gombachika (2013). In 1985, Parasuraman et al. suggested that when expectation score is greater than perception score, service quality will be perceived as being less than satisfactory; service quality is satisfactory when expectation score is equal to perception score and when expectation score is smaller than perception score, service quality will be more satisfactory.

Table 4.12: Gap Mean Scores of NamPower Service Quality

Dimensions	Service Quality Statements	Gap Scores
Tangibility	Modern looking equipment	-1.333
	Well managed offices	-1.124
	Employees are well dressed	-1.151
	The records (of electricity connection, bills and meter, etc.) are maintained properly	-1.172
Reliability	Electricity services are supplied at the promised time	-1.112
	Shows sincere interest in solving customer problems	-1.195
	Fixes electrical faults correctly on the first time	-1.127
	Provides correct estimated time of supply restoration	-1.133

	Power meter readers honestly note correct reading from the meter	-0.935
Responsiveness	Inform exactly when services will be performed	-1.252
	Employees quickly respond to customers' complaints	-1.225
	Always be willing to help customers	-1.266
	Never too busy to respond to customers' requests	-1.254
Assurance	Employees behaviour still confident with customer	-1.213
	Feeling safe using electricity	-0.810
	Employees polite with customers	-1.204
	Expertise staff is available to properly deal with physically challenged (deaf, dumb, blind) customers	-1.148
Empathy	Employee personally attend the customers for their queries and complaints	-1.145
	Has operating hours suitable to customer's needs	-1.098
	Knows and understands customers particular needs	-1.162
	Resolves customers' complaints	-1.178
	Company motivates the customers to save electricity	-1.171

Source: Author's fieldwork (2018)

Remarkably, from Table 13 it can be seen that the largest gap existed within the tangibility dimension for the item stating 'modern looking equipment' which is -1.333, indicating that most respondents were not impressed with how the power transformers, electricity meters and lines were looking. This could be explained by the fact that rural distribution customers experienced frequent power outages (ECB, 2017), hence, customers felt that it was due to old electrical infrastructures such as electrical poles and transformers that kept

breaking and tripping. These results confirmed that that it is not easy to keep customers satisfied through functional quality when the technical quality is poor (Binshan et al., 2011). To address this discrepancy, NamPower needs to regularly maintain and upgrade its rural electrical infrastructure in to minimise unplanned power outages. The gaps were also large for these two items: NamPower employees are 'always be willing to help customers (-1.266), and NamPower employees are 'never too busy to respond to customers' requests (-1.254) under the responsiveness dimension. This is also evident from Table 14 that among the five dimension of service quality; customer responses indicated that responsiveness scored the largest gap of -1.249. This is consistent with the findings of Chodzaza and Gombachika, (2013) whose gap analysis on the public electricity in Malawi also recorded the largest gap in responsiveness dimension.

Table 4.13: Mean Gap Scores of NamPower Service Quality Dimensions

Dimensions	Expectation	Perception	Gap
Tangibility	4.357	3.212	-1.145
Reliability	4.201	3.100	-1.101
Responsiveness	4.360	3.111	-1.249
Assurance	4.357	3.263	-1.094
Empathy	4.125	2.974	-1.151
Overall Service Quality	**4.280**	**3.132**	**-1.148**

Author's fieldwork (2018

NamPower customers indicated that they were very dissatisfied with the type of service they received from NamPower regarding their employees' willingness to assist customers and provide them with prompt service. Hence, NamPower must set up measures to

counteract these shortfalls in order to decrease the gap so that customers are satisfied with the service quality.

On the contrary, according to customers' responses, the smallest gap was found within the assurance dimension from the item that stated that customers 'feel safe using electricity' from NamPower with gap score of -0.81. The assurance dimension also recorded the smallest gap of -1.094 among the five dimensions of service quality (see Table 14). This indicated that customers were less dissatisfied with attributes in these dimensions, specifically the safety aspect of NamPower electricity. Gaps were also found to be small in reliability attribute that dealt with the ability of NamPower to honestly take note of correct readings from the electricity meters (-0.935). This did not come as a surprise because this is where NamPower makes money, so they put more effort into making sure that the correct meter readings are taken and recorded. Also, customers would not take it lightly when they are billed for what they have not consumed. These low gaps denoted that the management of NamPower is making a good attempt to meet the expectations of the customers regarding the two attributes.

The negative gap that existed between the expectation and perception on all dimensions of service quality meant that customers were not entirely satisfied with the service quality they received from NamPower. This finding is consistent with Aggarwal and Kumar's (2018) findings. They found out that customers were not satisfied with their electricity service delivery in all five dimensions of service quality, with the most marked dissatisfaction occurring on the dimensions of responsiveness and empathy. The overall satisfaction of NamPower residential customers can be derived from the overall gap score

of NamPower service quality which is at -1.148 (see Table 14). This means that the level of NamPower service is lower than what customers expected, indicating that there was no customer satisfaction. Customer responses clearly indicated that NamPower is not doing a good job in meeting the expectations of their residential customers.

4.8 Service Quality and Its Effect on Customer Satisfaction

The third objective of this study was to evaluate the impact of the five service quality dimensions on customer satisfaction of NamPower Residential customers. Based on the analysis from Section 4.5 and 4.6, it can be observed that all 5 dimensions of service quality have a significant influence on customer satisfaction, though they are not equally significant. An excellent service quality (positive gap) has a positive impact on the satisfaction of customers while poor service quality (negative gap) has a negative impact on customer satisfaction. Poor response time to queries and emergencies, long unexplained power outage, long reconnection time and account closure could be some of the service quality that could lead to the dissatisfaction of electricity customers (Nashappi et al., 2014).

Customer satisfaction is determined by matching expected and perceived service quality (Sharabi and Davidow, 2010). In order to provide superior services, service providers need to understand customers' expectations (Parsuraman et al., 1985, 1988). It is important for NamPower to identify those service quality dimensions that are most important to customers, as they are the predictor of customer satisfaction. Customers should know what to expect in any process of delivering service at any level of an operation (Ramseook-

Munhurrun et al., 2010) because if at any stage the customer gets less than what he or she expected, the customer would feel dissatisfied. The gap score results in Table 13 and 14 enabled the researcher to discover how NamPower customers perceive service quality and try to identify what attributes or dimensions of service quality customers satisfied or dissatisfied with. It is apparent that satisfied customers complain less and therefore are more likely to create fewer problems for the company.

It can be seen from Tables 13 and 14 that there was negative gaps between customer expectations and customer perception of all attributes of NamPower service quality. This indicated that, generally, the service provided by NamPower to their residential customers is less satisfactory thereby causing dissatisfaction among their customers. These findings are consistent with results reported in some of the service quality studies in the power sectors (Chodzaza & Gombachika, 2013; Saini, 2018c, 2018d). Therefore, it is imperative for NamPower and other electricity distribution companies in Namibia to improve service quality by giving customers what they need and when they need it. For the residential customers of Nampower, the most important service quality dimension which proved to have the most significant impact on customer satisfaction was the responsiveness dimension with a mean expectation score of 4.360, followed by tangibility and assurance with mean expectation score of 4.357 each.

Although these results differ from those of Aggarwal and Kumar (2018), and Chodzaza and Gombachika, (2013) who respectively found assurance and reliability dimension to have the most impact on customer satisfaction, they are in agreement with those obtained by Saini (2018d) and Chatzoglou (2013). Customers expected the most, regarding the

manner in which employees deal with customer complaints and the time it takes to restore power after an outage. Therefore, NamPower needs to pay particular attention to the attributes within the responsiveness dimension. Additionally, customers wanted NamPower to have modern looking equipment and to train their employees to be more knowledgeable so that they can inspire confidence and trust in customers. The least important dimension of service quality was the empathy dimension with an expectation mean score of 4.125 followed by reliability with an expectation mean score of 4.201. This is consistent with results reported in Aggarwal and Kumar (2018) for a power distribution company in India. It can be established that empathy dimension demonstrated to have the least significant effect on customer satisfaction comparing to other dimensions of service quality.

Likewise, it can be observed from the gap scores in Table 14 that customers were most dissatisfied with the dimensions of responsiveness with a gap of -1.249, and least dissatisfied with assurance dimension with a gap of -1.094. This indicates that NamPower service quality performance was better within this dimension when compared with the other four dimensions. Electricity safety attribute within the assurance dimension received the most credit from respondents, indicating that NamPower customers were least dissatisfied with the safety measures that NamPower employed on its electrical network. Thus, NamPower needs to keep up with whatever they have been doing regarding assurance aspects and pay special attention on responsiveness in order to positively affect the satisfaction level of their residential customers. NamPower service management should also pay attention to developing employees to be knowledgeable in order for them

to be able to pay attention to customers and their needs, and offer fast and efficient services to customers.

4.9 Chapter Summary

This chapter presented the results from the analysis of the data collected from residential customers of NamPower as well as the findings and discussions. The chapter presented demographic profile of respondents and data collected from NamPower residential customers about their expectation and their perception of service quality provided to them. The results showed that there were noticeable gaps between customer expectations and perception in all five dimensions of service quality. The gaps were as a result of poor service quality that ultimately led customer dissatisfaction. Furthermore, the results showed that all five dimensions of service quality have a significant impact on the satisfaction of residential customers of NamPower. The next chapter provides the summary of the findings, conclusion and recommendations.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The aim of this research was to investigate the effect of service quality dimensions on customer satisfaction of NamPower residential customers. The study also aimed at finding the underlying customer expectations and perceptions about the quality of the services they received from NamPower and to identify the attributes that contributed to low customer satisfaction. The SERVQUAL model used for data collection also established service quality gaps emanating from the discrepancy between what customers expect and what NamPower deliveres to their residential customers. This chapter summarises the findings of the research, the conclusions, limitations, recommendations as well as suggestions for future study.

5.2 Summary of the Key Findings

This section presents the key findings from this research of perceived service quality by the residential customers of NamPower based on the analysis that was conducted in order to achieve the objectives of the study.

5.2.1 Customers' Expectations and Perceptions Level towards the Quality of Services Provided to NamPower Residential Customers

The present study evaluated the perceived service quality against customer expectations by assessing customers' expectations and perceptions of the quality of service delivered

to NamPower residential customers, using the following five dimensions of service quality: tangibility, reliability, responsiveness, empathy, and assurance. The study found that customers had high expectations regarding all attributes of NamPower service quality with an average expectation score of 4.28 out of 5. These expectations are consistent with results reported in Achchuthan et al. (2014) and Odongo and Ngacho (2015). The safety of electricity attribute within the assurance dimension recorded the highest expectation mean score of 4.464, indicating that customers expect NamPower to provide them with a safe and efficient supply of electricity. On the other hand, the findings of the study reveal that respondents' perceptions concerning the quality of NamPower services were moderate, indicating that most respondents were unsure of the quality of NamPower services. The average customers' perception score was at 3.133 out of 5. The lowest perception mean score of 2.941 emanated from the empathy dimension where the majority of respondents felt that NamPower failed to encourage customers to reduce their electricity consumption. These findings are in contrast with that of Tsoukatos et al. (2010), but they are consistent with results obtained by Yingbao and Li (2011).

5.2.2 Discrepancy Gap between Customers' Expectations and Perceptions towards the Quality of NamPower Services

The research further assessed the gap between customers' expectations and their perceptions of the service quality of NamPower. The results revealed that the mean scores of customer expectations on all service quality attributes were higher than their perceptions, resulting in a negative SERVQUAL gap ranging from -0.81 to -1.333. The findings emerging from this objective are consistent with results reported in Chodzaza and

Gombachika, (2013) for service quality and customer satisfaction among industrial customers in Malawi. This indicated that respondents were not entirely satisfied with the service they received from NamPower. The largest gap was found between what customers expected regarding the modernity of NamPower equipment and what they actually experienced with such equipment (-1.333). This indicated that most respondents were dissatisfied with the ageing of NamPower electrical infrastructure found in rural areas. The smallest gap was found between customers' expectations and customers' perceptions of electricity safety attribute (-0.81), indicating that NamPower was on the right path concerning the protection aspect of their electrical network and apparatus. The overall service quality gap of NamPower was -1.148, denoting that the quality of NamPower services was lower than what most respondents expected, consequently, indicating that the overall satisfaction level of NamPower residential customers was poor.

5.2.3 Impact Service Quality Dimensions on Customer Satisfaction of NamPower Residential Customers

The present study further attempted to evaluate the impact of the five service quality dimensions on customer satisfaction of NamPower residential customers using the SERVQUAL model. The effect of service quality on customer satisfaction was assessed by analysing respondents' expectation scores because expectation is a proxy indicator of the importance customers attach to that particular service quality dimension (Mwanza & Chingarande, 2013). Additionally, the outcome of the analysis of the customers' expectations and perceptions as well as the gap between them enabled the researcher to identify which of the service quality dimensions was the most important to customers.

Findings revealed that all the five dimensions of service quality and all its 22 attributes/items had a noticeable impact on customer satisfaction in agreement with results obtained by Chodzaza and Gombachika (2013) and Aliata et al. (2016). The findings showed that the responsiveness dimension raised the highest level of expectation with a mean score of 4.36 out 5, thereby revealing that it was the most important factor in determining satisfaction of NamPower residential customers. This findings were in contrast with previous literature regarding service quality in power distribution company (Aggarwal & Kumar, 2018).

From the above, it can be deduced that most respondents wanted NamPower employees to be eager to help and provide prompt services to customers at all times. This showed that respondents were less dissatisfied when they received a quick response from service employees. Furthermore, the study found that the empathy dimension was the least important factor in determining customer satisfaction with NamPower services indicating that many customers did not demand individualised attention from service personnel. Thus, when the service quality dimensions of NamPower were arranged from the most to the least significant dimension for customer satisfaction, responsiveness resulted to be the strongest dimension, followed by tangibility, assurance, reliability and empathy being the weakest dimension.

5.3 Conclusion

The main objective of the present study was to examine the impact of service quality dimensions on customer satisfaction of NamPower residential customers in Namibia,

using the five dimensions of SERVQUAL model. The findings revealed that service quality and all its dimensions, namely, tangibility, reliability, assurance, responsiveness and empathy, had an impact on customer satisfaction. This research would aid managers of NamPower and electricity distributors alike to increase their understanding of customers' expectations and perceptions on the dimensions of service quality. It has provided an insight of what attributes customers expected the least and what attributes they expected the most from the organisation. This would enable the company to explore the weakest dimension and distribute resource accordingly in the service areas in order to minimise the gap that existed between customers' expectations and NamPower services.

It has been further established that not all the service quality attributes or dimensions are equally significant to customer satisfaction. However, the study could not statistically establish the significant level of the impact of service quality on customer satisfaction because it did not test any hypothesis and conduct regression analysis to model the association between the five dimensions of service quality and customer satisfaction. Nevertheless, the study reaffirmed that the SERVQUAL model could be applied to measure service quality in the electricity sector of Namibia similar to various researchers around the world who have used it. Being able to measure service quality could benefit service providers by providing them with reliable information that could be utilised to monitor, maintain and enhance service quality. This would ultimately increase the satisfaction level of customers and ultimately boost the reputation of the organisation.

In addition to the above, there was a possibility that some items on the SERVQUAL questionnaire used for the study were not answered objectively. This is because the

respondents had to first fill in the expectations section before the perceptions' section. Therefore, this might have resulted in a number of attributes contributing to the unsatisfactory rating of NamPower services. However, this did not rule out the fact that NamPower had service quality deficits that needed to be addressed to provide satisfactory services to their customers. To other marketing scholars, the present study can be used as a reference for future studies on the impact of service quality on customer satisfaction in the ESI of Namibia and other part of the world. Furthermore, it will contribute new knowledge to the existing body of service quality in the electricity sector literature, specifically in the African setting, "a research context which happens to be neglected in academics" (Chinomona & Sandada, 2014, p. 125). The study concluded that the findings have addressed the research issues and thus, achieved the aim and objectives of the study as demonstrated above.

5.4 Recommendations

Considering the key findings above, the study recommends some possible measures that could be adopted by NamPower management to improve the satisfaction level of their customers. It is recommended that NamPower should focus on service quality dimensions or attributes that recorded large negative gap scores, such as attribute 1: modern looking equipment, attribute 10: inform exactly when services will be performed, attribute 12: always be willing to help customers and attribute 13: never too busy to respond to customers' requests. Some ways the company can use to counter this is to invest more in new equipment and technologies to improve its distribution network. NamPower could also introduce a customer service charter to provide customers with information about

where to get services and when to expect them. In addition, service personnel should show sincere interest in resolving the customer problems and should always take time to understand the specific needs of customers; this will boost customers' confidence about service quality of NamPower, thereby enhancing customer satisfaction. NamPower should also conduct regular customer surveys to learn about the customers' expectations and perceptions in order to assess whether quality gaps are narrowing, relaxing or expanding and make the necessary changes or corrections as recommended by Machado and Diggines (2012).

5.5 Suggestions for Future Research

Even though this study could contribute to the broader research enterprise, it was limited in some ways, and, therefore, some future research possibilities were suggested. Firstly, since the survey was conveniently administered through e-mail/internet, customers who had no access to the internet were left out. For this reason, it was also very difficult to use random sampling strategies to draw a statistically representative sample for this study. Therefore, results of this descriptive study might not be a true representative and could not be generalised to the entire population of NamPower residential customers or that of the ESI of Namibia. Future researchers should carry out an inferential study using random sampling to ensure that all members of the population have an equal chance of being included in the study in order to yield representative results that could be inferred to a larger population.

Finally, this study used a quantitative method to collect data from residential customers only, excluding transmission customers, employees and management of NamPower. Therefore, qualitative data collection methods such as expert views, observation, discussions and focus groups could be used to collect data from different stakeholders in order to enrich and expand the present study. To enrich this study further, a similar study can also be conducted using SERVPERF as the instrument to measure service quality instead of SERVQUAL and compare results of the two studies to determine which of the two models overrides the other. Moreover, a comparative research is also suggested to investigate the impact of service quality on customer satisfaction in other sectors of the economy, in order to determine which sector is leading and which is lagging in service quality. Above and beyond, these will vastly supplement in acquiring data, which will be central to improve customer service both in the private and public sector of Namibia.

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APPENDICES

Appendix A: Survey Invitation Email

Gmail Issai Namupala <nissaias@gmail.com>

NamPower Residential Customers 2018 Service Quality Survey

nissaias@gmail.com <nissaias@gmail.com> Mon, Aug 6, 2018 at 1:33 PM
Reply-To: nissaias@gmail.com
To: nissaias@gmail.com

Dear NamPower Customer

I am a student of Master program at the University of Namibia. I am conducting research for my Master degree thesis on the topic "An Investigation into the Impact of Service Quality on Customer Satisfaction of NamPower Residential Customers". I wish to invite you to participate in this study by completing the questionnaire electronically below this mail. The purpose of the study is to investigate customers' perception regarding the quality of NamPower electrical services with a view to identifying factors that must be changed or issues that must be addressed to improve customer service, customer satisfaction, and the image of the NamPower. Customer satisfaction is of great importance to every company and this survey will help the researcher to measure your satisfaction and improve on the company's inadequacies to provide an excellent service. The study will also satisfy a requirement for the award of the degree of Master of Business Administration at the University of Namibia. I shall be grateful if you would spare a few minutes to complete the questionnaire below. The information you provide will be used solely for the purposes of the study and it will be kept confidential. Please answer the questions as correctly as you can and to the best of your knowledge. I will be very grateful if you could answer all the questions honestly so I can accomplish the research objective.

My research supervisor is Dr. Stewart Kaupa, Senior Lecture, Department of Marketing & Logistics at Namibia University of Science and Technology (NUST).

Your participation will contribute to the success of this project. Should you have any issues with accessing the survey page, please call me on 081 2981 447 or send an email to nissaias@gmail.com so that I can assist you. Thank you very much.

Kind Regards,
Isaias Namupala

NamPower Residential Customers 2018 Service Quality Survey

Thank you for agreeing to take part in this important survey evaluating the quality of NamPower services. The questionnaire will take approximately 15-20 minutes of your time. If you require additional information or have any questions, please feel free to contact me at 081 2981 447 or send an email to nissaias@gmail.com.

The questionnaire consists of three sections:
• Section 1: General Information
• Section 2: Customer Expectations

Appendix B: Research Questionnaire

NamPower Residential Customers 2018 Service Quality Survey

Thank you for agreeing to take part in this important survey evaluating the quality of NamPower services. The questionnaire will take approximately 15-20 minutes of your time. If you require additional information or have any questions, please feel free to contact me at 081 2981 447 or send an email to nissaias@gmail.com.

The questionnaire consists of three sections:
- Section 1: General Information
- Section 2: Customer Expectations
- Section 3: Customer Perceptions

Thank you for participating. Your input is highly appreciated. Every opinion counts.

* Required

General Information

Please tick as appropriately in the box next to the option of your choice, only one option for each question.

1. **Gender** *
   Mark only one oval.
   - ◯ Female
   - ◯ Male

2. **Age Group** *
   Mark only one oval.
   - ◯ 21-30
   - ◯ 31-40
   - ◯ 41-50
   - ◯ 51-60
   - ◯ Pensioner

3. **Education** *
   Mark only one oval.
   - ◯ Grade 10
   - ◯ Grade 12
   - ◯ Graduate
   - ◯ Post Graduate

4. **Occupation** *
Mark only one oval.

- ◯ Unemployed
- ◯ Self Employed
- ◯ Government Employee
- ◯ Private Sector

Customer Expectations

This section of the survey deals with your opinions regarding electricity distribution companies . Please show the extent to which you think electricity distribution companies should possess the following features. What we are interested in here is a number that best shows your expectations about institutions offering electricity services. Only one tick for each statement (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree).

Tangibility

5. **1. Excellent electricity distribution companies will have modern looking equipment.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

6. **2. The physical facilities at the excellent electricity distribution company will be visually appealing.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

7. **3. Electricians of an excellent electricity distribution companies will have neat personal protective equipment and proper uniform.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

8. **4. Records for electricity connection, meter readings and bills will be properly maintained at an excellent electricity distribution company.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

Reliability

9. **5. An excellent electricity distribution company will provide services within the promised time.** *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

10. **6. When a customer has a problem, an excellent electricity distribution company will show a sincere interest in solving it.** *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

11. **7. Excellent electricity distribution companies will perform the service right the first time.** *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

12. **8. Excellent electricity distribution companies will provide correct estimated time of supply restoration.** *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

13. **9. Excellent electricity distribution companies will insist on error free records.** *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

Responsiveness

14. **10. Employees of excellent electricity distribution companies will tell customers exactly when services will be performed.** *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

15. **11. Employees of excellent electricity distribution companies will give prompt service to customers.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

16. **12. Employees of excellent electricity distribution companies will always be willing to help customers.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

17. **13. Employees of excellent electricity distribution companies will never be too busy to respond to customers' requests.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

Assurance

18. **14. The behaviour of employees in excellent electricity distribution companies will instil confidence in customers.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

19. **15. Customers of excellent electricity distribution companies will feel safe using electricity.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

20. **16. Employees of an excellent electricity distribution company will be consistently courteous with customers.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

21. **17. Employees of an excellent electricity distribution company will have the knowledge to answer customers' questions.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

Empathy

22. **18. An excellent electricity distribution companies will give customers individual attention** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

23. **19. An excellent electricity distribution company will have operating hours convenient to all their customers.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

24. **20. An excellent electricity distribution company will have employees who give customers personal service.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

25. **21. Excellent electricity distribution companies will resolve customers' complaints.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

26. **22. The employees of excellent electricity distribution Company will understand the specific needs of their customers.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

Customer Perceptions

The following statements relate to your feelings about NamPower in particular. Please show the extent to which you believe NamPower has the feature described in the statement. Here, we are interested in a number from 1 to 5 that shows your perceptions about the NamPower (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree). Only one tick for each statement.

Tangibility

27. **1. NamPower has modern looking equipment.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

28. **2. NamPower has well managed offices.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

29. **3. Electricians of NamPower always wear neat uniform and personal protective equipment.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

30. **4. NamPower's records for electricity connection, meter readings and bills are properly maintained.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

Reliability

31. **5. When NamPower promises to do something by a certain time, it does so.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

32. **6. When you have a problem, NamPower shows a sincere interest in solving it.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

33. **7. NamPower performs the service right the first time.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

34. **8. NamPower provides you with correct estimated time of supply restoration.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

35. **9. NamPower insists on error free records.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

Responsiveness

36. **10. Employees of NamPower tell you exactly when the services will be performed.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

37. **11. Employees of NamPower give you prompt service.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

38. **12. Employees of NamPower are always willing to help you.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

39. **13. Employees of NamPower are never too busy to respond to your request.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

Assurance

40. **14. The behaviour of employees of NamPower instils confidence in you.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

41. **15. You feel safe using electricity from NamPower.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

42. **16. Employees of NamPower are consistently courteous with you.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

43. **17. Employees of NamPower have the knowledge to answer your questions.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

Empathy

44. **18. NamPower gives you individual attention.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

45. **19. NamPower has operating hours convenient to you.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

46. **20. NamPower has employees who give you personal attention** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

47. **21. NamPower resolves all your complaints.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

48. **22. The employees of NamPower understand your specific needs.** *
Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

Thank you for participating; your input is highly appreciated!

Appendix C: Research Ethics Clearance Letter

NBS
NAMIBIA BUSINESS SCHOOL
UNIVERSITY OF NAMIBIA

03 August 2018

TO WHOM IT MAY CONCERN

Re: MBA Student – Mr Isaias N. Namupala, Student No: 200401653

As part of our MBA Programme, students are expected to submit a research report after completion of their course-work. They need to explore in detail, some concepts and issues pertaining management strategies. To do that effectively, they need to conduct interviews and obtain practical examples.

Mr Namupala has chosen your organization to approach for information. It is against this background that I wish to kindly request you to assist Mr Namupala with the information he requires. Accept our assurance that the data will be used for academic purposes only. A copy of the completed document will be available at the Namibia Business School for perusal. His research synopsis indicates that his topic touches on *"an investigation into the impact of service quality on customer satisfaction of Nampower residential customers."*

Your kind assistance is highly appreciated.

Yours sincerely

NAMIBIA BUSINESS SCHOOL NBS 03 -08- 2018 UNIVERSITY OF NAMIBIA Inspiring Minds & Shaping the Fu

Greenfield Mwakipesile. Dr
Research Co-Ordinator
Namibia Business School
University of Namibia
Tel: +246 61 413 500
Fax: +246 61 413 512
Email: mwakipg@nbs.edu.na

Appendix D: Research Permission Letter

P O Box 25681
Windhoek
E-mail: Isaias.Namupala@nampower.com.na

23 August 2018

Mr. Braam Vermeulen
The Divisional Manager: Transmission
NamPower

Dear Mr. Vermuelen

Re: Request to use NamPower data and have access to NamPower residential customers

I am Isaias Namupala, an Assistant System Controller at National Control. I am currently registered as a student of Master of Business Administration (MBA) with Namibia Business School of the University of Namibia. I am undertaking a research on the topic **"An Investigation into the Impact of Service Quality on Customer Satisfaction of NamPower Residential Customers"** as part of the requirement for the degree. Therefore, I would like to ask permission from NamPower to have access to their residential (small) customers' contact details and collect data from them.

All data collected from customers will be treated strictly as confidential and purely for academic purpose. More information regarding what the research entails are contained in the attached research proposal and copy of permission letter to conduct this research from my school.

Looking forward to your favourable response.

Yours Sincerely
Isaias N. Namupala (Researcher)
Namupala ..... 04/09/2018 .....
Date

Recommended/ ~~Not Recommended~~

..... 5/09/2018 .....
Head of Business Unit Date

..... 08-10-2018 .....
Manager: Organisational and HR Development Date

Approved/ ~~Not Approved~~

..... 10/10/18 .....
Managing Director Date

Appendix E: Certificate of Editing

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29 November 2018

DR G. MWAKIPESELE
NBS
University of Namibia

SUBJECT: EDITING OF MASTER'S THESIS: ISAIAS NAMUPALA (200401653)

This letter serves to confirm that I copyedited ISAIAS NAMUPALA'S MBA thesis titled AN INVESTIGATION INTO THE IMPACT OF SERVICE QUALITY ON CUSTOMER SATISFACTION OF NAMPOWER RESIDENTIAL CUSTOMERS.

I declare that I professionally edited the thesis and removed mistakes and errors in spelling, grammar and punctuation. In some cases I improved sentence construction without changing the content provided by the student. I also removed some typographical errors from the thesis.

I also declare that I am a professional editor, and that I have edited many master's and doctoral theses here in Namibia, Zimbabwe and South Africa.

It was a pleasure reading and editing your student's thesis.

Please contact me should you need some clarification.

Yours sincerely

Prof J. Kangira (PhD)

Prof Jairos Kangira (PhD)
Cert. in Education (University of Zimbabwe); Cert. in Creative Writing (Lancaster University/British Council); Dip. in Journalism & Professional Writing (Transworld Tutorial College – UK); Grad. Cert. in Tertiary Education Management; Master of Tertiary Education Management (University of Melbourne); BA -Linguistics (University of South Africa); BA Special Hons -Linguistics (University of Zimbabwe); MPhil -Linguistics (University of Zimbabwe); Master of Tertiary Education Management (University of Melbourne); PhD - Rhetoric (University of Cape Town)

Rapporteuring: international conferences, local conferences, workshops, seminars and general meetings
Editing and Proof-reading: Dissertations/Theses, Research Proposals, Business Proposals, Research Projects, Reports, Manuscripts/Books, Minutes, Conference Reports