

**AN INVESTIGATION INTO THE EFFICIENCY AND  
EFFECTIVENESS OF NaTIS ONE STOP CENTRES IN RENDERING  
SERVICES: A CASE STUDY OF THE ROADS AUTHORITY OF  
NAMIBIA**

**A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS  
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## **ABSTRACT**

This study focused on examining the efficiency and effectiveness of NaTIS One Stop Centres in rendering services using the Roads Authority (RA) of Namibia as a case study. Emphasis was on the following research objectives; determine the efficiency and effectiveness of NaTIS One Stop Centres on operations, to analyse the level of service delivery at NaTIS One Stop Centres from the customers' perspective and to examine the current levels of customers' satisfaction at NaTIS One Stop Centre. The research adopted a mixed approach and is explanatory in nature. Collected data was analysed using content analysis by looking at similarities and differences among sets of data, Microsoft excel and the statistical package for the social science software (SPSS).

The study established that NaTIS One Stop Centres (NOSCs) are in a position to be efficient given the amount of revenue that is generated annually, but never the less not effective when it comes to service delivery. The Roads Authority management and NaTIS One Stop Centre customers are in agreement that service improvements are required at these Centres. The major recommendation for this study is that; the Roads Authority should establish ways to channel some of the profits generated to infrastructure development at NaTIS One Stop Centres, devise strategies to interact with customers to get their views and invest in skills development programs to empower NaTIS One Stop Centres' employees.

**Key words:** Efficiency, Effectiveness, NaTIS, Roads Authority of Namibia.

## DECLARATION

I, Vionah Nsozi Sikabongo, 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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## **DEDICATION**

First and foremost, I give thanks to the Almighty God for blessing me with a supporting family; my husband Godwin, my daughter Nalukwi, my sons Geekay, Prince, my sister Majaka and my late brother Raymond for believing in me throughout my academic journey and whose support and encouragement is beyond words.

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## LIST OF ACRONYMS

MTWC.....	Ministry of Works,Transport and Communication
NaTIS .....	Namibia Traffic Informations Systems
NOSC .....	NaTIS One Stop Centre
RA .....	Roads Authority
SPSS.....	Statistical Program for the Social Sciences

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## **CHAPTER 1 INTRODUCTION**

The study was conducted in Swakopmund in the Republic of Namibia under the topic “An investigation into the efficiency and effectiveness of NaTIS One Stop Centres in rendering services, a case study of the Roads Authority of Namibia”. This chapter outlines the background of the study, the problem statement, and objectives of the study, research questions, the significance of the study, the methodology used and how the study is structured.

### **1.1 Background of the study**

For the purpose of this study, efficiency is defined as measuring the organisation’s ability to achieve the desired output with minimum input. Roghanian, Rasli and Gheysari (2012), defines efficiency as the organisation’s ability to achieve the output with minimum input, and effectiveness as the organisation’s ability to achieve its objectives and goals. The Roads Authority’s strategic goal number one is to ensure safe, sustainable and efficient provision and maintenance of the national road network through streamlining operations among other issues (Roads Authority’s Strategic plan, 2015-2018). A customer will be identified in this study as, “a person who buys goods or services and a user or consumer of such a good or service” (Carroll, 2011).

The NaTIS One Stop Centres are responsible for rendering services such as vehicle and driver registration and licensing across the country. The locality of the study is Swakopmund One Stop Centre in the Erongo region of Namibia.

### **1.1.1 Management of NaTIS One Stop Centres**

The NaTIS One Stop Centres are responsible for rendering services such as vehicle and driver registration, licensing and operators. Prior to the establishment of the Roads Authority, this function was delegated to the receiver of revenue under the Ministry of Finance while the examination of drivers and vehicles was performed by the Namibian police traffic unit, whereas the then Ministry of Works, Transport and Communication retained the regulatory framework. With the establishment of the Roads Authority in 2000, the functions of vehicle and driver related operations became part of the Roads Authority, leading to the establishments of NaTIS one Stop Centres to ensure that customers are able to access the services from one centre/point.

Indications thus far, are that if implemented properly, public-sector reforms are likely to improve efficiency and improve service delivery (Kempe, 2012). There is enormous pressure on service organisations to improve the way business is done with customers as service organisations strive for higher levels of customer service (Bradley, 2011). The study will explore the extent to which efficiency and improved service delivery has been achieved since the implementation of the Ministry of Works, Transport and Communication's Project 2000 with specific focus on the Roads Authority's NaTIS One Stop Centres.

Namibia's vehicle population has increased from two hundred and thirty-nine thousand eight hundred and five (239 885) since February 2007 to three hundred and seventy-three thousand one hundred and sixteen (373 116) in February 2017, representing a 64

per cent increase (e-NaTIS, 2017). The increase in vehicle population translates into an automatic increase in the demand for NaTIS services and impacts on service delivery. Efficiency and effectiveness, calls for quality service delivery to meet or exceed customers' expectations. In a service driven environment such as NaTIS One Stop Centres, the quality of service is measured by how a customer perceives and evaluates the service.

## **1.2 Statement of the problem**

Keyter (2006) explains that service delivery in the public sector is a highly complex issue that involves a number of transactions between the service provider and the recipient hence a multi-sectoral approach is needed to deal with such complexity. Researchers argue that efficiency measures the performance of the organisation by its ability to transform inputs into outputs, where production is best described as a measure in which inputs are transformed into outputs (Roghalian *et al.*, 2012).

According to, Carroll, (2011) when a customer is not satisfied with the service, the blame is on the organisation as a whole. Therefore, the ultimate responsibility lies with management to ensure that there are systems in place that are efficient and effective. Delivering good service to customers is the main goal that every service provider strives to accomplish from time to time (Carroll, 2011).

NaTIS One Stop Centres are prone to customers' complaints which are often published in the media. On 21 October 2011, the Namibian newspaper's front page carried a story

under the headline “NaTIS needs to improve its systems” and on 27 November 2014. The same newspaper carried a story titled “NaTIS standards same countrywide” in its publication alleging inconsistency and poor service quality at NaTIS One Stop Centres when it comes to rendering services to the customers.

Kempe (2012) contends that when customers complain about service delivery in the public sector, they do not only point a finger at one particular department but the perception transcends to the overall service delivery in the public sector as a government. Considering the above, this study will zoom at service delivery at NaTIS One Stop Centre to determine the level of customer satisfaction and expectations in relation to what these NaTIS One Stop Centres are able to deliver within the resources at their disposal and recommend thereafter possible remedies to management for service improvement.

Carroll (2011) states that “it is no longer enough to push a product or service at a customer believing that it will meet that individual’s needs when that customer fits into a certain demographic set up. A service provider will need a deeper understanding of their customers to meet the expectations”. The value of good service is very important to the survival of any business. Companies that will survive in the future are those that focus on customers’ needs in the present as this is fundamental to the success of an organisation (Machado and Diggins, 2012). Given the background cited above, this study aims at investigating the efficiency and effectiveness of NaTIS One Stop Centres when it comes to service delivery.

### **1.3 Objectives of the study**

The overall objective of this study is to investigate the efficiency and effectiveness of NaTIS One Stop Centres on operations when it comes to service delivery. The study aims: to analyse the level of service delivery at NaTIS One Stop Centres from the customers' perspective, to examine the current levels of customer satisfaction at the NaTIS One Stop Centres and to determine efficiency and effectiveness of NaTIS One Stop Centres' operations.

### **1.4 Hypotheses of the study**

The chi-squared hypotheses test was used to test for independence of association in order to establish whether two variables are dependent or independent of each other. According to Wegner (2012), it is vital for any business to know whether two random variables that are associated can influence a decision in the process. In so doing, a hypothesis test establishes whether the association that is observed in a cross-tabulation table is by pure chance or a genuine association between the populations from which the sample was drawn. In this study, chi-squared test is based on the frequency count data to make a comparison between the set of observed frequencies obtained from the sample. Wegner (2012) furthermore advises that the following steps must be undertaken before hypothesis test:

In this study, five hypothesis test steps were adopted to test the independence of associations between two categorical variables and the presentation of the analysis was

done under chapter four in this study. There are: association between visits and waiting time, frequency and staff behaviours, waiting time and staff behaviours, service speed and waiting time at NaTIS One Stop Centres.

**Step 1:** define null and alternative hypotheses

**Step 2:** determine the region of acceptance of null hypotheses

**Step 3:** Calculate the sample test statistic ( $\chi^2 - \text{stat}$ )

**Step 4:** Compare the sample test to the region of acceptance

**Step 5:** Draw statistical and management conclusions

### **1.5 Significance of the study**

The study was chosen primarily because of the public interest in the operations of NaTIS One Stop Centres of which very little seems to be known regarding its efficiency and effectiveness when it comes to service delivery. In so doing, customers will be given the opportunity to assess the service levels according to how they see it and how they would want it to be. This study may influence the way the public-sector organisations in Namibia interact with their customers, thereby provide an understating of customer perceptions and expectation as far as service delivery is concerned and contribute to service improvements in public sector organisations. The study will provide information from the customers' perspective that might influence policy changes in the way people perform their jobs in public sector organisations.

Despite widespread recognition that is given to customer service as the primary goal of any service driven organisation, research on the efficiency and effectiveness of NaTIS One Stop Centres when it comes to service delivery is sparse. Customers being the most valuable asset in any service driven organisation need to be appreciated, although public sector organisations are not so much under pressure due to the monopolistic environment that they operate in (Carroll, 2011). The findings of this study should help the Roads Authority to focus on the service gaps, if any, to enable the management of the NaTIS One Stop Centres to prescribe and implement initiatives that will fill gaps, thereby improve the quality of service at the centres. This should in turn increase positive customer perception. Furthermore, the study will assist in understanding customer practices in the public-sector that requires urgent responsive and sustainable management action.

According to Carroll (2011), it is important to create structured feedback opportunities on overall customer experience and relationship to get customer views and feedback on the service being rendered by a company. In so doing, the findings of the study may serve as a listening post that will capture insights. Thus, the findings from this study will contribute to the improved management of the NaTIS One Stop Centres thereby recommend remedial measures that might influence policy to benefit the Roads Authority and its stakeholders.

Furthermore, the findings from the study might be useful to other service providing organisations in Namibia as it might give insight on the benefits of efficiency and

effectiveness in service delivery. The study will lay a foundation to inspire future research on service delivery, thereby contributing to the body of knowledge in the service industry in Namibia.

### **1.6 Limitations of the study**

The study is limited to Swakopmund NOSC of the Roads Authority of Namibia. The targeted respondents were all customers and employees of the RA. Furthermore, the study is limited to a public-sector organisation in the transport industry. Nonetheless there is relevance to any service organisation in any industry. The study relied on key informants from the interviews conducted to compensate for limited literature on MWTC2000 project implementation and service delivery in the public sector of Namibia.

In addition, there is a potential for lack of inclusivity on the secondary data, the NaTIS operational costs during the period 2015 to 2017 did not cover the indirect costs that were paid for by the line Ministry (Ministry of Works and Transport). This was due to variations in the disbursement of funds for expenditure in the financial reports between the Roads Authority of Namibia and the Ministry of Works and Transport. Lastly, hypotheses of the study are limited to chi-square hypothesis tests due to the nature of the study.

### **1.7 Delimitations of the study**

Due to budgetary constraints, the study was limited to NaTIS One Stop Centres (NOSCs) customers in Swakopmund and may not be representative of all the Centres across the country. However, due to the similarities in the operations, the findings of the study can be generalised across all Centres.

### **1.8 Summary**

A systematic literature review was conducted using a variety of databases, search engines and library resources for relevant studies to identify which ones were applicable to the study's objectives.

### **1.9 Organisation of the study**

This study is organised into five chapters. Chapter one is the introduction, describing the background of the study, statement of the problem, research objectives and research questions; significance of the study, limitations of the study, delimitations of the study and how the study is organised.

Chapter two presents a review of the literature, thereby tracing the developments that have ensued over the years on efficiency and effectiveness in customer service, service quality and customer satisfaction in the public sector. The study's conceptual definition is presented through the concept of efficiency and effectiveness, customer service on service delivery and customer satisfaction. Chapter three describes the methodology in

detail through elaborating the research design, population, sample and sampling technique, research instruments, data collection procedure and data analysis techniques. Chapter four provides an analysis of data and discourse the research findings in order to address the research questions.

Lastly, chapter five contains a summary of the findings of the study and recommendations to the management of the Roads Authority and suggest future research directions, and finally draw the study's conclusions.

## **CHAPTER 2 LITERATURE REVIEW**

### **2. Introduction**

This chapter seeks to analyse relevant literature and findings that are important to this study. The theoretical literature presents and seeks to explain the theories related to the subject matter, namely efficiency and effectiveness in relation to service delivery. Literature review is a description and critical analysis of what other authors have written, through focusing on the research questions and objectives (Saunders, Lewis and Thornhill, 2016). Bak (2009) states that literature review includes scholarly journals, scholarly books, authoritative databases and primary sources that comprise of newspapers, films, audio and video tapes and other secondary sources.

This review, positions the study within the scholarly context. Firstly, it presents developing theories within the Namibian vehicle, driver registration and licensing industry through drawing lines between the phases that have taken place before and after

independence. Secondly, the study illuminates some theoretical learning to bring constructs which are of relevance to this study. Thirdly, this chapter theorises the effects of efficiency and effectiveness, customer perception and customer satisfaction within the context of service delivery.

## **2.1 Namibia's Road Transport Industry: past and present**

Road transportation has been the means through which users depend for their daily transactions to support their core activities. This involves users such as retailers to enable them to import the goods into the country. Savage, Fransman and Jenkins (2008) states that the road transport sector's contribution to the Namibian economy through direct and indirect employment is immense. The MWTC2000 Project recommended innovative models of public service delivery through collaboration in public service delivery, that being public - public collaborations between public agencies at the same level of government and public - private collaborations where the government would retain responsibility for a service that is totally or partially managed by the private sector. In the case of the management of vehicle, driver registration and licensing in Namibia, public –public collaboration was considered to be appropriate at the time, given the various units that were scattered under different departments at the time. In so doing, provision was made to cater for public - private collaborations in future. Collaboration for public service delivery refers to reciprocal and supports that two or more distinct public-sector agencies or public and private administration provides each other in order to deliver a public service (Savage *et al.*, 2008).

Research on the successful implementation of MWTC2000 Project in Namibia is scarce. Despite this gap the increase in customer complaints at NaTIS One Stop Centres requires a study such as this one to get to the root cause of the complaints. Therefore, it is important at this point of the study to ask: How efficient and effective are NaTIS One Stop Centres when it comes to service delivery, what is the customers' perception of the service being rendered? and to examine the level of customer satisfaction. The study seeks to tackle these questions through literature review.

## **2.2 Efficiency and Effectiveness in service delivery**

Roghanian, Rasli and Gheysari (2012) posit that there is a general trend in the world where resources are limited for organisations to do more with less. Researchers argue that efficiency measures the performance of the organisation by its ability to transform inputs into outputs, where production can best be described as a measure in which inputs are transformed into outputs. Commonwealth review committee (2010) describe efficiency as the success with which the organisation uses its resources to produce products and services. Effectiveness is defined as the extent to which the outputs of service providers meets the objectives set for them by governments. Roghanian *et al.*, (2012) maintains that efficiency is the organisation's ability to achieve the output with minimum input, and effectiveness as the organisation's ability to achieve its objectives and goals.

Lee and Johnson (2012) cites efficiency as the ratio of output into input and it is important for any business to measure how efficient inputs are utilised to produce

outputs. Roghanian *et al.*, (2012) in a journal “**Productivity through effectiveness and efficiency in the banking industry**” opines that greater efficiency is achieved in operations when there is more output per unit of input. When that happens then the business attains optimum efficiency. Lalitha (2013) says that efficiency in service delivery is a question of how well the service provider allocates inputs such as staff and assets to provide maximum output such as customer satisfaction to meet customer needs. Although efficiency in customer service is adequately examined in the private sector, research related to efficiency on service delivery on the public sector is limited (Lalitha, 2013).

Kempe (2012) argues that attaining effectiveness in the public sector is complicated due to the rigid processes that are involved in decision making before implementation. Public sector institutions are directly or indirectly driven by politicians who reflect the interests of the citizens, who are often poorly informed and sometimes suspicious of the government. However, it is important to prioritise and set targets to ensure that service delivery aims at serving the citizens within the said goals (Kempe, 2012). Kumasey (2014) further underscores factors such as cost and revenue generated by the channels used to provide such service must be taken into account because of the impact on service delivery. Input costs in service delivery channels are likely to affect the output in the process. Kempe (2012) also reported that service delivery in the public sector must be offered on a cost recovery basis to ensure efficiency and effectiveness in the operations. When the operational costs exceed the revenue generated, a public service provider is likely to experience constraints in service improvements as funds meant for operational

costs will not be adequate, leading to the service provider not being in a position to render satisfactory service to the customer.

According to Hill and Hill (2011), effective services are reproducible and replicated leading to control over key elements of the offering and delivery systems. One such industry that is doing well using this approach is the franchise industry, where delivery systems, training and equipment is routinely checked by the franchiser to allow the company to expand using the same tried and tested model.

### **2.3 Techniques in service efficiency**

Traditional efficiency studies however, tend to measure performance of an organisation through its ability to transform inputs into outputs. Frei and Harker (2010) posit that what is often overlooked is how inputs are transformed into outputs. When it comes to a public-sector organisation whose mission is service delivery rather than making profit, the process design is often neglected. It is important to analyse the service delivery process to illustrate the efficacy in the process. In so doing, inputs such as labour cost that play a key role in the production of such a service are taken into account.

Lee *et al.*, (2012) argue that when a business provides a service, there are resources involved generating the output when that happens, operational efficiency is determined by the outputs produced in comparison to the input resources consumed. Thus,  $\text{efficiency} = \text{output}/\text{input}$  - in this case the ratio of the current productivity is efficiency. Over the years, it has become almost impossible for a service organisation to become

more efficient without incorporating new technology or other changes in the production process, (Lee *et al.*, 2012).

Miahaiu, Opreana and Cristescu (2010) acknowledges that measuring efficiency and effectiveness in the public sector is often seen as problematic due to the fact that the public sector seeks not only to attain economic benefits but rather get social benefits for the citizens. However, Common Wealth Steering committee (2010) argues that the period from 1980s to 2000 has seen changes in the form of organisational culture as far as service is concerned in the public sector within the developed and developing countries. As a result, there is a shift in the mind-sets where public sector organisations are moving towards a cost recovery approach of doing more with less. It is difficult to quantify and identify the input and output in the public sector, due to the fact that economic benefits are not realised immediately, for example an investment in infrastructure may only be realised after a few years of such investment (Miahaiu *et al.*, 2010). According to Sahoo (2013), public sector organisations deliver services at a price that is not determined by market forces, often making it very difficult to determine the aggregate output. Nevertheless, input costs on operational expenses can be measured against the profit/revenue generated at the output level. The goal of every operation should be to run efficiently, consistently, offer high quality services and strive for continuous improvements to benefit the customer (Sahoo, 2013).

Frei *et al.*, (2010) posits that an organisation can still define a set of inputs and outputs to make a comparison on decision making units within the same environment. Mihaiu *et*

*al.*, (2010) argue that, public sectors' decision-making units (DMUs) are often scattered leading to environmental variations in settings. Sahoo (2013) asserts that output in a public-sector organisation is easier to measure, leading to a narrow focus on efficiency and the exclusion of wider issues on effectiveness. When clear goals are set from the beginning, prioritising becomes easy for the decision maker. Organisations that do not measure performance on its internal processes often find it difficult to improve service delivery; and in many countries resources have been misallocated due to absence of annual assessments that should enable a more realistic achievement of targets (Sahoo, 2013). These resources entail money, time, and materials to produce the product or service.

Kempe (2012) contends that the aim of efficiency and effectiveness in the public sector differs with that of the private sector and cautions on making a comparison as the service dimensions are offered within totally different setting with diverse goals. The aim of operations is to run efficiently through the provision of high quality service with the goal of improving customers service, in so doing conditions are favourable through the maximisation of outputs given the resources used (Kempe,2012).

#### **2. 4 The role of customer service in service delivery**

Customer service is “the provision of service to customers before, during and after purchase”. It includes any back up service that a company renders to customers to maintain loyalty and secure a sale (Brink and Berendt, 2008; Berendt and Tait, 2012). Cudjoe, Anim and Nyanyofio (2015) describe customer service as a term most widely

used in the business sector, it is a business term that explains the measurement of the satisfaction in relation to the service being offered to a customer by a business when rendering a service or providing a product. However, it is not the actual service that is of importance but rather the perceptions that a customer has of the service, hence one need to see the overall service from the customers' point of view (Boshoff and du Plessis, 2009).

Kempe (2012) argue that citizens are now taking a more active role in the way government resources are used to make government more accountable for the expenditure of taxpayers' funds. According to Hill and Hill (2011), customers form part of the delivery system and should be actively engaged in the system as they provide the capacity within the system that lowers costs and helps some aspects of the operations. Cudjoe et al., (2015) argue that most organisations provide repeat services that are standard and call for the design of any delivery system to have a component of customer service management to link the customers with the service providers.

Arora (2012) argue that service organisations are under increased pressure to offer the service now rather than later. The customer service approach is shifting from profit centric in distinguishing oneself to customer-centric. One such industry that has managed to meet customer perceptions when it comes to service delivery since the early 1980s is the banking industry. Arora (2012) posits that the banking industry has gone through tremendous changes to embrace technology through the use of e-business when it comes to service delivery of products and services. The shift is as a result of customer

demands and the competitive environment that banking institutions find themselves. However, the same cannot be said when it comes to public sector organisations, whose focus is on social responsibilities (Arora, 2012).

Heizer and Render (2011) argue that most services are delivered while the customer is present; as a result the intangibility and perishability of such service make it difficult to determine the reasonable price for a service. This is due to the intangible nature of such a service. More often than not, a service provider might think that the set price is reasonable, while the customer might think otherwise (Kruger and Ramphal, 2009). Whereas, Hill *et al.*, (2011) suggest that a service provider must review the delivery performance for the service through analysing and comparing the delivery lead times that customers request against the actual delivery lead times that an organisation delivers the service. Once analysis and a comparison is done, the service provider should strive to improve the scheduling of activities, improve process reliability and eliminate any waiting time between the steps in the process. When that is done the speed of delivery can be used to identify grey areas and the causes of poor performance in terms of identifying improvements to analyse the total customer lead time from the receipt of the order to the point of payment. According to Hill *et al.*, (2011), it is essential for any service organisation to map the actual operations process to determine the steps that make up the operations lead time, so as to clear the bottlenecks.

Brink *et al.*, (2008) contends that service quality and customer service is of utmost importance to customers and the service provider due to its impact on customer

relationship with the service provider. When customers are satisfied they tend to return again, therefore for any service organisation, good service builds a customer relationship which is profitable in the long run.

Machado *et al.*, (2012) says that customer service is what an organisation does to add value to its products and services in the eyes of the customer. What happens at the point of contact between the customer and the service provider does enhance the customer experience. Schultz and Doerr (2009) reported that organisations who market their products/services tend to have a better customer service record than those who do not, as doing so allow them to be conversant with their customers, which leads to better client engagement and a better chance of increased affinity with the actual and potential workforce. Nevertheless, customer service varies and so does the definition as it depends on personal experience. Cook (2008) has the idea that the ability to provide excellent service is vital for attracting and retaining customers. According Bradley (2011), customer service requires preparation in every delivery aspect and when the preparation is done effectively; dealing with a customer at the frontline becomes very easy as it sets the tone for efficiency and reliability.

According to Kumasey (2014), there is a link between expected service and customer service, service managers are expected to ensure that customers receive excellent service and the service rendered should be of the highest quality. When a customer gets what is expected and perceived at the right time and place, then it is considered as satisfaction than when a customer does not get what is expected and perceived. Cook (2008) argues

that the service delivery in the public sector is different to the private sector based on the mission and vision. The private sector will always strive for service excellence whereas the same cannot be said about the public sector. In this study, the research would postulate that customer service at NOSC's is fuelled by service delivery.

## **2.5 Customer satisfaction in service delivery**

Boshoff and du Plessis (2009) describe service quality as a prerequisite for customer satisfaction". The difference between service quality and customer satisfaction is that service quality is an attitude, whereas satisfaction is an encounter (Boshoff *et al.*, 2009). Brink *et al.*, (2008) describe that service quality is the ability of the organisation to meet or exceed expectations". Berendt *et al.*, (2012) argue that delivering quality service entails conforming to customer expectations consistently. Moreover, service quality measures how well the level of a service delivered matches the expectations during and after the service. The customer thus evaluates the service based upon expected quality received prior to the service.

Berendt *et al.*, (2012) argue that when customers evaluate service quality, the practice will involve judging and looking through the process and to see how it is done. Boshoff *et al.*, (2009) however, argue that the delivery of quality service is essential in building and maintaining customer relationships through delivering on promises made as the essence of mutually satisfying relationships. Berendt *et al.*, (2012) maintains that service quality is a multidimensional concept, which may have different meanings for different industries and different disciplines. In a service context, service quality is complex to

assess objectively as perceptions of service quality are often regarded as relevant rather than the concept itself.

Cudjoe *et al.*, (2015) posits that there is a link between service quality and satisfaction level. Customers' satisfaction is influenced by the level of total service quality Michel *et al.*, (2008) contends that service quality improvement calls for organisations providing services to know what their customers think about the service being offered in order to address failures and make improvements. Cudjoe *et al.*, (2015) argue that the one-size-fits-all approach might work at certain times but in the face of high levels of competition, service organisations ought to adopt different customer satisfaction techniques to satisfy and retain the customer.

Osman, Ali, Zainuddin, Rashid and Jusoff (2009) posits that consumers of all products and services tend to be more demanding due to the competitive market place that they find themselves in, leading to an increase in customer expectations and customer demands on service quality. Cudjoe *et al.*, (2015) maintains that service organisations should strive to meet these demands effectively and efficiently in order to retain customers and in so doing, sustain the market position through customer retention (Osman *et al.*, 2009). Michel and Meuter (2008) argue that service delivery failures lead to disconfirmation which transcends ultimately into dissatisfaction on those who are at the receiving end. Kempe (2012) posits that although some researchers argue that service delivery failures have the potential to get the best strategy, it is impossible to eliminate all service failures in the public sector. Michel *et al.*, (2008) maintains that

organisations that react to service delivery failures are in a much better position to implement service recovery plans and gains customer loyalty. Ramseook-Munhurrun, Naidoo and Lukea-Bhiwajee (2010) clarify that service quality is related to customer satisfaction and loyalty where satisfaction plays a mediating role between customer perception of service quality and customer behavioural intentions. A service organisation is able to deliver good quality service effectively and efficiently through a delivery process that provides better service to external customers (Ramseook-Munhurrun *et al.*, 2010).

Zeithaml, Bitner and Gremler (2009) uphold that customer satisfaction has become a key intermediary objective in service operations due to the benefits that it brings to the organisation. Baker (2013) says that satisfied customers are willing to pay more for the benefits received and tolerate the price increase. Zeithaml *et al.*, (2009) argue that in order to achieve a high level of customer satisfaction, an organisation should deliver a high level of service quality that is usually considered an antecedent of customer satisfaction.

Baker (2013) describe that customer satisfaction is a function of the difference between expected and perceived service. Zeithaml *et al.*, (2009) maintains that when perceived service exceeds the expected service levels, the customer satisfaction increases. However, when the perceived service falls short of what the customer expects, it is regarded as dissatisfaction. Baker (2013) argues that service quality is inherently subjective in nature but customer satisfaction would always lead to repeat purchases.

What is coming out clear from other scholars is that understanding customers' needs and what drives customer satisfaction is vital in-service delivery as it sets precedence for increased market share, bringing in more profits and customer retention. For this study, the research will propose the benefits of customer satisfaction in service delivery at NaTIS One Stop Centres.

## **2.6 Challenges in rendering services to customers**

Lovelock and Wirtz (2011) describe customer satisfaction as a “short term emotional reaction to a specific service environment”. Whereas Machado *et al.*, (2012) says that customer satisfaction is, “attitudes resulting from what a customer thinks should happen at that particular time through interaction. Thus, when a customer is happy with the service or a product that is provided satisfaction is seen to have taken place”. According Bradley (2011), a service provider has the potential to inspire confidence gradually with the customer through service consistency and reliability, thereby stimulate trust, keep promises, being accurate, doing things on time, being efficient, being professional and dependable which leads to customer loyalty.

Bradley (2011) says that today's customers are more sophisticated than they have been, as they demand value for money and need reassurance that their decision to deal with the organisation is the right one.

Boshoff *et al.*, (2009) argues that finding your customers and discovering what they want is vital to a successful service organisation and this call for every service provider

to be proactive in identifying enablers of customer satisfaction and measure satisfaction levels. Brink *et al.*, (2008) maintains that gone are the days when a service provider would wait for customers to complain in order to address the shortcomings in delivery processes or measure the organisation's progress in customer satisfaction based on the number of customer complaints received.

Carroll (2011) maintains that the situation is different though in a private service organisation where customers sometimes do not complain about the service but instead voice their dissatisfaction by defecting to the competitor. On the other hand in a public-sector organisation, customer options are limited due to the monopolistic nature of the service. Kempe (2012) posits that customer complaints are channelled through public platforms such as radio or newspapers and the service provider ought to ensure that there are procedures and systems in place for customers to know what to expect. This includes equipment being in safe working order, making sure that the organisational service knowledge is up-to-date, and creating an ideal working environment that creates the right impression. Bradley (2011) points out that feedback mechanisms should be functional, complaints procedures and service standards need not be complicated.

According to Schultz *et al.*, (2009), a customer servicing organisation is likely to be imperfect, hence customers may not be 100 per cent satisfied with what they are getting. Machado *et al.*, (2012) maintains that the service provider should be aware of this and be determined to listen to their customers and improve where possible. A business ought to know whether it is providing a quality service or not, through recognition of problems

that arise through customer complaints on gaps in service to put measures in place to address the gaps. Bradley (2011) argues that it is difficult for any service organisation to know how customers feel about its service quality without assessing the customers' perceptions and thereafter devise a customer service strategy that meets the needs of the customers to ensure quality service provision.

Benjamin (2012) says that knowing how customers perceive the service quality and being in a position to measure the service quality has more benefits to a service organisation as it gives management the opportunity to access reliable data that can be used to monitor and maintain improved service quality. Schultz *et al.*, (2009) argue that customers often expect more from the company than what is perceived; hence achieving a 100 per cent customer satisfaction is almost impossible for any organisation.

Cook (2008) posits that customers would often perceive service quality through every aspect of their contact with the organisation; hence most organisations develop all aspects of relationship management with their customers. Carroll (2011) maintains that when a customer is not satisfied with the service, the blame is on the organisation as a whole and not on the individual employee that was the point of contact during service delivery. Benjamin (2012) maintains that the ultimate responsibility lies with management to ensure that systems in place are efficient and effective.

Markovic and Raspor (2010) posits that in a highly competitive service industry, service is an important element of gaining competitive advantage, hence solving customers' problems when brought to the attention of management is critical. Carroll (2011) says

that performing an error free service at the promised time and convenient business hours is essential to the success of the business. Markovic *et al.*, (2010) maintains that service reliability in a service driven business has emerged as an essential predictor of perceived service quality. Kruger *et al.*, (2011) argue that service provision is usually labour intensive and unlike a product, a service cannot be manufactured and stored. Although the quality of service is difficult to measure due to its subjectivity, service centres must be located within close proximity to customers because customers are usually present when the service is rendered.

Sharma (2016) argue that the way an organisation deals with customer complaints has an effect on customer satisfaction and perception hence, it is vital for the organisation to treat their customers fairly at all the times. Kruger *et al.*, (2011) says that attending to customer queries timeously with courtesy gives a positive perception about the organisation. Markovic *et al.*, (2010) maintains that business procedural guidelines need not be complicated and training of employees on service operations to enable and sustain long term customer relationship management is vital. Sharma (2016) points out that “customers are often burdened with service procedures and paperwork, assistance from the organisation goes a long way in putting them at ease and gains their confidence.” In this study, the research will look at the challenges that NaTIS One Stop Centres are experiencing when it comes to service delivery.

## **2.7 Meeting customer expectations when rendering a service**

Bradley (2011) says that customer expectation is what people think should happen and how they think they should be treated when asking for or receiving a service. Whereas customer perceptions are processes with which individuals select, organise and interpret information received in a given environment. Boshoff *et al.*, (2009) argue that perceptions are influenced to a large extent by customer characteristics through what is already known and feelings about the service and then later on these feelings prior knowledge become perceptions. Bradley (2011) argues that customer satisfaction is the fulfilment the customer gets when satisfied with the product or service provided. Benjamin (2012) maintains that customer satisfaction is influenced by customer expectations as each customer will have their own thoughts as to what to expect from the organisation. With customers becoming more and more demanding, the question remains, are these NaTIS One Stop Centres meeting the demands and expectations of their customers?

According to Machado *et al.*, (2012), customers have two basic levels of expectations that must be met, namely the primary and secondary expectations. Primary customer expectations are based on basic requirements for the interaction whereas Secondary expectations are based on previous experiences that serve as enhancements to the primary expectations. Carroll (2011) posits that measuring what matters to customers is an indication of predicting good business results. Whereas Boshoff *et al.*, (2009) argues that a company that understands and manages the value of customer perceptions tends to

maintain good relationships with customers. Carroll (2011) argues that service providers often struggle to predict customer expectations and recommends customer perception surveys to help determine customer expectations and respond accordingly.

Zeithaml *et al.*, (2009) posits that when customers evaluate service quality; a comparison is made between what is perceived and the service encounter of those customer expectations. Schultz *et al.*, (2009) argue that when evaluating efficiency and effectiveness on service delivery, measurement programs must include perception of service and customer expectations as part of the service quality equation. Berendt *et al.*, (2012) argue that customer expectations serve as a benchmark with which present and future service encounters are compared so that customers can predict the service through anticipating certain performance levels, of the desired service. Thus, one can imagine the service they are likely to get by making comparison and equating the service through the minimum tolerance expectations that they are willing to accept (Brink, *et al.*, 2008) and it is through these comparisons that adequate service and perceived service can produce a measure of perception in the minds of customers.

Schultz *et al.*, (2009) says that service quality involves “the use of qualitative and quantitative methods to continuously improve the organisation’s process in order to meet and exceed customer needs, wants and expectations”. In order to achieve service quality, the service provider must identify the value added in relation to the service provided to the customer, identify the customer and determine expectations as closely as possible, determine the critical needs that are required as an enabler to satisfy customers’ needs,

define the process flow, pilot the process to eliminate process flaws in order to avoid wasting resources and strive for continuous improvements through seeking constructive feedback from the customer (Schultz *et al.*, 2009). Looking at what other scholars have pointed out, one is left to wonder as to how best NOSCs can improve its efficiency and effectiveness in rendering services to the general public.

Brink *et al.*, (2008) argues that today's customers are more demanding, knowledgeable and sophisticated than they were thirty years ago, this has led to high expectations and more choices than ever before. Malik (2012) argue that private sector organisations tend to conduct customer satisfaction surveys more often than public sector agencies, in order to tailor the products and services that meet the needs of the customers to survive in the competitive environment that the private sector organisation operates. Kempe (2012) argue that public sector organisations advocate improved service delivery but little attention is given to customer satisfaction to determine whether service expectations are met. Cook (2008) argues that it is cumbersome for a public sector organisation to achieve customers satisfaction due to the fact that public sector organisation are service driven rather than profit driven

Sharma (2016) maintains that significant gaps still exist between service expectation and perception; hence some companies still struggle to translate customer expectation into customer satisfaction. Benjamin (2012) maintains that customer satisfaction depends on the level of trust and dependence that exists between the customers and the service providers. Therefore, when that expectation is not met by the service provider, it is

perceived in a negative way by the customer. Carroll (2011) says that customer service and customer satisfaction are two distinct and closely related constructs with a positive relationship. Therefore, service organisations that are prompt in taking immediate steps in areas of service delivery through intervention strategies tend to perform better and yield better returns as far as service quality is concerned.

Sharma (2016) maintains that knowing how the customers perceive the service quality and being in a position to measure the service rendered can go a long way to help the management of service organisations to realign service strategies to better understand the customer dynamics and various dimensions and how they affect the service quality and customer satisfaction. Michel *et al.*, (2008) maintains that where challenges and weaknesses exist, mechanisms should be devised for service improvements. For the purpose of this study, customer expectations are seen in the context of what customers' desire and want a service provider to offer rather than what the service provider offers. What is evident from other scholars is that, customers will always expect more from a service provider than what is perceived. Therefore, this study will postulate how NOSCs can to strive to improve service quality when rendering services.

## **2.8 Summary**

Despite the widespread recognition that has been attached to customer satisfaction over the years by other scholars, there seems to be no single position/agreement on what constitutes customer satisfaction. What is evident from the literature is that, for a service organisation to succeed in service delivery to the customers, the focus should evolve

from service centric to customer orientation to appreciate the vital role services play in any economy. In order to attain efficiency in service delivery an organisation needs to embrace a customer service culture through customer service programs that create interaction between the service provider and the customer. While both business and academic researchers acknowledge and agree on good service quality as core to any business success, service managers must first understand how customers perceive and evaluate their customer service before any customer service strategy is implemented.

The demand for public sector management to be transparent, efficient and effective in-service delivery has increased over the years and Namibia is no exception. This study therefore was necessary to assess the efficiency and effectiveness of NOSC's when it comes to rendering services in Namibia. In this study, NaTIS One Stop Centres are used as an example to determine whether MTWC2000 Project's main objective for improved service delivery has been achieved by the Roads Authority since its establishment 27 years ago.

## **CHAPTER 3 RESEARCH METHODOLOGY**

### **3 Introduction**

The research methods presented were used to gather information required to answer the research questions and fulfil the objectives of this research. Thus, the chapter outlines the research design, target population, sampling techniques and ethical considerations.

#### **3.1 Research design**

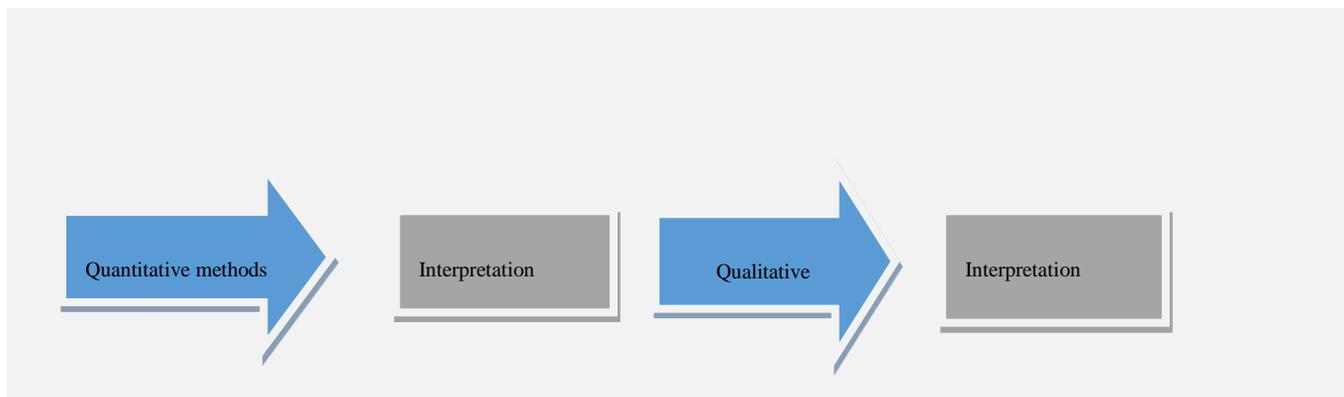
A research design sets the direction that is necessary to guide the research study and sets the tone. Kumar (2011) explains that this is a plan that the study adopts to answer the research questions reliably, validly, objectively and accurately. Research can be approached through deductive or inductive perspectives. Kumar (2011) explains that the deductive approach involves testing of theories to hypothesis testing, in this way data is collected and hypothesis testing follows to confirm the theory. Whereas inductive approach begins with specific theory then data collection before the theory is developed (Kumar, 2011). In this study, secondary data was collected to evaluate the efficiency and effectiveness of NaTIS One Stop Centres (NOSCs), interviews were held with the key informants, the researcher administered questionnaires and formulated the hypothesis before testing. As a result, the research study applied the deductive approach. Saunders *et al.*, (2016) states that establishing personal contact is important as managers are more likely to agree to be interviewed rather than complete a questionnaire when the interview topic is seen to be interesting and relevant to their current line of work. This method proved useful to access qualitative data from the key informants. The study applied the

sequential explanatory mixed research design, incorporating explanatory and deductive research designs.

### 3.1.1 Explanatory mixed method

The study adopted a mixed approach method, quantitative and qualitative research methods are widely used to conduct research (Saunders *et al.*, 2016). Quantitative research concerns itself with the measurement of quantity whereas qualitative research deals with the quality of the phenomenon (Hofstee, 2006). In this study, a mixed approach was found to be suitable to collect primary and secondary data. The design is called sequential explanatory mixed approach.

**Figure 3. 1 Sequential explanatory mixed method model**



Source: Saunders *et al.*, (2016).

According to Saunders *et al.*, (2016), the sequential explanatory method employs more than one phase of data collection and analysis where the researcher will follow the use of one method with another to elaborate the initial set of findings. In this case quantitative

data was collected and interpreted before proceeding to qualitative research. This approach was found useful for this study to allow the study to flow in a logical order.

### **3.1.2 Descriptive cross-sectional design**

According to Kumar (2011), research can be taken at a particular time or over a period of time. The research undertaken in this study was a one-time research as the researcher approached the sample elements only at once. Cross sectional was employed to accommodate the questionnaire.

According to Hofstede (2006), the aim of the descriptive research is to gain an accurate profile of events persons or situations to allow the researcher to draw conclusions from the data being described. A cross sectional design was used in this study to show interdependence between variables using chi-square, whereupon the data was collected at a particular time. Saunders *et al.*, (2016) recommends the use of cross sectional design when a study is conducted over a short period of time. This research design was chosen to examine, analyse and describe the level of service delivery and customer satisfaction at the NaTIS One Stop Centres.

The researcher had to describe questionnaires collected from the customers to bring out the state of affairs as it existed. The researcher further used the facts from the interview and the secondary data collected from the Roads Authority in order to analyse and make a critical evaluation of the problem.

## **3.2 Population**

Saunders *et al.*, (2016) defines population as “the complete set of cases or group members”. According to Kumar (2011), the population selected should relate to the research questions and objectives. The target population for this study was the vehicle owners in Swakopmund, in the Erongo region of Namibia. The region consists of twenty-one thousand, seven hundred and thirteen (21,713) registered vehicle owners, all of whom are serviced by the NaTIS One Stop Centre in Swakopmund.

## **3.3 Sample**

### **3.3.1 Sample composition**

Three hundred and ninety-three (393) questionnaires were printed for the study. Out of these questionnaires, two hundred and fifty-three (253), representing 64 percent of the sample, were completed and used as reference for this study. Saunders (2012) explains that a 100 per cent response rate is unlikely for a research, however a 45 per cent sample representation should be considered sufficient to make inference in a research. Considering this, the response rate was considered to be acceptable.

Table 3 .1 Sample composition

<b>Mixed Research</b>	<b>Target Population</b>	<b>Target sample proportion</b>
<b>Customers</b>	<b>21713</b>	<b>388</b>
<b>Roads Authority management</b>	<b>11</b>	<b>5</b>
<b>Total</b>	<b>21724</b>	<b>393</b>

Source: Research data (2017).

A sample of three hundred and eighty-eight (388) customers was chosen through the convenience sampling technique as referred to in table 3.1. The screening of the questionnaires was done upon which two hundred fifty-three (253) were used as reference for this study; representing sixty per cent of the target sample with three (3) questionnaires rejected. Saunders (2012) explains that a one hundred percent (100%) response rate is unlikely for a research and according to Kumar (2012), a response rate of above sixty per cent of the respondents is considered adequate for analysis as it is representative of the study. The primary data was collected with the aim of establishing the respondents' views on the efficiency and effectiveness of NaTIS One Stop Centres in order to determine the customers' perception and satisfaction on services being rendered at the centres. The data gathered was used to determine patterns and draw conclusions on the research problem.

Five (5) Roads Authority members of the management were purposively sampled, based on their expertise on the subject matter and used as key informants. The secondary data

was purposively scrutinised for relevance. Revenue and expenditure records from 2015 to 2017 were used as reference in this study. This was necessary in order to trim the large data to a manageable size. The respondents were code named and characterised for easy reference.

### **3.3.2 Sampling quantitative research**

The study used the non-probability sampling method to conveniently sample 393 participants. According to Tejada and Punzalan (2012), the use of Slovin's formula is recommended for business and academic research. The sample number was chosen using Slovin's sampling formula:  $n = \frac{N}{1 + N(e^2)}$  whereas  $N = 217013$  population,  $n = 393$  sample size,  $e = (1 - 0.95)^2 = (0.05)^2$  margin of error. According to Saunders *et al.*, (2016), a researcher must select the most appropriate sampling technique to answer the research question(s) from the range of non-probability sampling techniques available. Convenience sampling was found to be the most practical technique to collect primary data due to the large sample. Participants for the study were the Roads Authority customers at Swakopmund NaTIS One Stop Centre.

### **3.4 Research instruments**

In this study, the questionnaire was used as the main instrument of data collection through structured questions to collect primary data from the customers. Saunders *et al.*, (2016) describe questionnaire as a general term including all data collection techniques in which a person is asked to respond to the same set of questions. According to Quinlan (2011), primary data is information that researchers themselves create. In this study,

primary data was collected through questionnaires that were distributed conveniently and collected from the customers; Participants who were interested were selected and took part in the study through the completion of the questionnaire.

### **3.4.1 Quantitative research**

Zikmund and Babin (2007), states that quantitative method in a research derives three benefits for a study: descriptive, forecasting and decision making. Description in research refers to an investigation of which explanatory variables have a statistically significant effect on the dependent variable. In this study, descriptive research was used to describe and analyse research data.

### **3.4.2 Pilot testing of the questionnaire**

According to Hart (2005), pilot testing a questionnaire is administered to a smaller sample of the total sample population to assess possible challenges respondents are likely to encounter when answering the questions. Furthermore, Craswell and Poore (2012) recommend the use of pilot testing of questionnaire to overcome problems with the questionnaire instructions such as unclear questions and typographical errors. In this study, the purpose of pilot testing was to verify the clarity of the question and estimate the average time required to complete the questionnaire. The instrument was piloted on 11 September 2017 on fifteen customers in Swakopmund. Firstly, the procedure was explained to the participants. The participants took 5-10 minutes on average to complete the questionnaire. Secondly, a follow up discussion was done to determine if there were any ambiguities in answering questions. The respondents suggested some minor changes

that were incorporated in order to simplify the questions. Language of the questionnaire was simplified to make it clear. Thereafter, the questionnaire was submitted to the supervisor for feedback and approval to proceed.

The following changes were made after the pilot test two of the demographic characteristics had phrases “age group”, this was changed to “age” only, and “sex” was changed to “gender” to avoid confusion.

### **3.4.3 Structure of the questionnaire**

**Covering letter:** The covering letter was issued by the University of Namibia’s Business School (refer to appendix I). The purpose of the data collection was explained in the covering letter of introduction (refer to appendix III) with the sole purpose to entice participation.

**Section A:** Seeks information about demographic characteristics such as age, gender, marital status and level of education for respondents.

**Section B:** seeks for information about service delivery on frequency of visits to the NaTIS One Stop Centre, service waiting time, service satisfaction, service speed, cleanliness, staff behaviour, service attentiveness, courtesy and friendliness, efficient and effective and service information.

**Section C:** seeks out information on customer satisfaction on the overall service, whether the customer is able to use the centre in future, able to recommend the centre to friends and whether service improvements are required.

#### **3.4.4 Selection of respondents**

The questionnaire was handed out to the participants who volunteered to take part in the study in person. This method was found to be economical to the research as it diminished the chances of misinterpretation of the questions and minimised the delays in receiving the completed questionnaire. For the semi-structured interviews, participants comprised of senior and middle management that deals directly and indirectly with NaTIS related operations.

#### **3.4.5 Qualitative research**

Hofstede (2006, suggests that the researcher must identify the diverse characteristics prior to selecting the sample where heterogeneous variation sampling is concerned with purposive sampling. The study used the non-probability sampling method to purposively sample the qualitative data in the study. This was necessary to select secondary data that was relevant for the study. In this study, qualitative data was generated through the responses of the group that was selected purposefully based on the knowledge and experience of key informants on NaTIS operations. The revenue, visa-vis the operational expenses data over a period of three years (from 2015 to 2017), was used for the quantitative aspect and the data was found to be significant and relevant for this study.

According to Carson, Gilmore, Perry and Gronhaug (2005), qualitative data consists of a detailed description of events, situations and interactions between people. This is meant to provide depth and detailed qualitative studies that allows for the collection of data for

the study over a period of time. This allows for the researcher to experience an understanding of the phenomena.

Purposive sampling was used to select secondary data relevant for the study through conducting semi-structured interviews with key informants. According to Saunders *et al.*, (2016), an explanatory study is likely to include interviews in order for the researcher to be able to infer a causal relationship between variables. In this study, secondary data on NaTIS revenue and operational expenses was collected for comparison and analysis. Semi-structured interviews were conducted with key informants to provide the opportunity to probe answers to get the interviewees to explain their responses. Quinlan (2011), states that secondary data is data that is already in existence, which researchers use rather than creating data. The technique proved to be useful for the study leading to emerging theories in the study; cross-tabulation was adopted to compare the revenue generated in comparison to the operational expenditure for a period of three years i.e. 2015 to 2017.

### **3.5 Procedure**

The researcher sought permission from the Chief Executive officer of the Swakopmund, a unit of the Roads Authority. Permission was granted in writing in July 2017 to carry out the study. The Swakopmund Centre Head was contacted to explain the purpose of the study and for the researcher to introduce herself. The aim of such a visit was to determine the appropriate time when the researcher could collect data and ensure that the collection of data does not disrupt the operations at the centre. Permission was granted to

collect the data from 10h00 to 15h00 between Mondays and Fridays, the reason given by the Centre head was that when they open for business at 08h00, it is often hectic due to the volume of the customers that flock to the centre and there is not enough space for all customers to sit in the waiting room and or service cash hall. 10h00 was found to be the suitable time that one could find customers seated in an orderly manner and could be conveniently approached for the survey study. The completion of the questionnaire was done in the waiting room and service cash hall. The data collection was done by the researcher from 18 October 2017 to 8 December 2017.

### **3.6 Data analysis**

#### **3.6.1 Quantitative data analysis**

According to Blumberg, Cooper and Schindler (2011), data analysis requires a technique to reduce accumulated data to a manageable level, developing summaries, looking for patterns and applying statistical techniques. In this study, the chi-square test was used to determine the association between the variables. The data collected was cleaned, coded and edited for errors, mistakes, uniformity and completeness. The results were analysed using the Statistical Package for the Social Sciences (SPSS) software. The chi-square hypothesis test was used as a statistical tool to conduct the goodness of fit tests and test for equality to come up with descriptive statistics and frequency distribution. In the end, all the information collected was summarised and synthesised to obtain the overall results of the study.

### **3.6.2 Qualitative data analysis**

Content analysis technique was used to analyse the research notes from the one-on-one interviews with the management of the Roads Authority. Kumar (2011) explains that content analysis may be used to denote negative or positive attitudes when analysing data. Whereas Saunders *et al.*, (2016) expounds that content analysis deals with analysing what is apparent in the data. In this study content analysis was used to code and categorise qualitative data in order to give meaning to the data and support the explanatory technique to support the quantitative analysis on primary and secondary data.

### **3.6.3 Chi-square hypothesis test**

Chi- square hypothesis testing was used as a statistical tool in this study to determine if there were associations between, differences or a relationship between variables.

### **3.7 Location of the study**

The study was conducted at Swakopmund NaTIS One Stop Centre. This centre has the third largest vehicle population in the country representing twelve per cent (12%) of the vehicle population after Windhoek and Oshakati NaTIS One Stop Centres. In addition, the centre was found to be ideal because of easy access to data.

### **3.8 Validity**

Internal validity is established when an intervention statistically leading to the outcome can be proven (Saunders *et al.*, 2016). In this study, validity was applied using causal and explanatory studies to determine the relationship between the variables and thereafter describe the causal relationship to explain the relationship and emerging themes. In this study, more than one source of data was used to collect the information for the research. This aspect (of using more than one source) was used to confirm validity/credibility and the authenticity of the research data.

### **3.9 Reliability**

Secondary and primary data was examined for consistency by mitigating threats to internal reliability through ensuring that questionnaires were distributed and collected from the customers during the same time of the day from 18 October to 8 December 2017. This allowed for the researcher to eliminate participant error and biasness and attain consistency. Hofstede (2006) advises that when collecting secondary data, reliability is achieved through collecting data from a reliable source. In this study, the secondary data was extracted from the Roads Authority's finance system to make a comparison between operational expenditure and revenue generated from the NaTIS One Stop Centres.

### **3.10 Research ethics**

The draft questionnaire was submitted to the University for Ethical Code Consideration and to seek the gate keeper's letter. Permission and guidance was sought from the highest authority to collect data. Participation in the study was voluntary through informed consent and the respondents' anonymity was guaranteed as per the ground procedures of an ethical research. Data collected will be stored in a lockable cabinet for five (5) years and thereafter it will be disposed in line with the University of Namibia's rules and procedures.

### **3.11 Summary**

In this chapter, the method used in this study was described, through the research design and instruments used to collect data and the techniques used to analyse the data. Issues of validity, reliability, and ethical considerations were addressed. The next chapter presents the findings and analysis of the results.

## **CHAPTER 4 DATA PRESENTATION AND ANALYSIS OF RESULTS**

### **4. Introduction**

In this chapter, Primary data collected through questionnaire, Secondary data extracted from the Roads Authority's financial records and one on one semi-structured interview conducted with the key informants is analysed and presented. Reference is made to the literature review in chapter two to make a comparison to the findings to identify

similarities gained from other scholars. Data was categorised, described and ranked through frequency distribution, tables using chi-square using SPSS. Prior to constructing tables, the data was grouped into class intervals to represent the frequency of occurrence. Tables were chosen to reflect the proportion of occurrence of values for one variable and provide clues and accurate representations. Saunders *et al.*, (2016) suggests that adopting triangulation approach in a research enables the use of two or more method of collection within one study to ensure that the data is a true reflection of what it ought to be.

#### **4.1 Data analysis and management**

Data analysis was preceded by data capturing, cleaning and editing processes. The data received was checked for completeness. Data entry was carried out after the collection process and variables were defined in SPSS using value labels and micro soft word document for qualitative data.

#### **4.2 Qualitative description and presentation of the findings**

In order to make sense of the qualitative data, secondary data collected was trimmed for a three-year period, from 2015 to 2017 to allow for the management of the data. Secondary data on revenue and operational expenses was accessed from the Roads Authority. In this study, operational expenses were confined and limited to the following expenditures:

Printing and stationery, remuneration/staff cost, repairs and maintenance, utilities, courier and postage, telephone and fax, office rentals, fixtures and fittings, advertising and promotions and general office expenses.

The revenue data for the said period was chosen for this study as it was found to be relevant and latest.

#### **4.2.1 Deliverable: operational efficiency and effectiveness of natis one stop centres**

Table 4. 1 NaTIS revenue and operational costs from 2015 to 2017

<b>Year</b>	<b>Revenue</b>	<b>Operational costs</b>
<b>2015</b>	<b>\$ 480,261,326.40</b>	<b>\$ 60,161,559.70</b>
<b>2016</b>	<b>\$ 545,042,661.24</b>	<b>\$ 55,816,574.90</b>
<b>2017</b>	<b>\$ 665,310,571.32</b>	<b>\$ 73,320,064.94</b>

Source: Research data (2017).

NaTIS One Stop Centres under the management of the Roads Authority are in a position to make a significant profit of more than one hundred percent annually, given the information in table 4.1. This correlates with Roghanian *et al.*, (2012) postulation that an organisation's ability to achieve the desired output with minimum input symbolises efficient and effectiveness. The question remains then, if these NOSC's are in a position to make such significant profit, why are customers unhappy with the service delivery?

#### **4.2.2 Secondary data analysis**

The revenue collected between 2015 to 2017, shows that there is an upward trend in revenue growth. The operational expenses incurred over a period of three years were minimal leading to high profit margins over the said period. From the information presented in table 4.1, one can conclude that NaTIS One Stop Centres are a going concern in terms of operational efficiency and this correlates with Harris, Botten and McColl (2008) conclusion that for any business to survive, it must be in a position to make a profit after paying off all the expenses in order to survive in the market.

#### **4.3 Primary data response rate**

##### **4.3.1 Quantitative description and presentation of the findings**

The information presented in this section pertains to the population survey study.

###### **4.3.1.1 Respondent's demographics**

This section presents the results of the characteristics on four demographics namely; age, gender, marital status and level of education. The demographic data was based and collected on the basis of these factors. Nominal level of measurement was used to name and assign labels to a series of values.

### 4.3.1.2 Age distribution of the respondents

Table 4. 2 Categorisation of responses: age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
18 - 25 years old	63	24.9	24.9	24.9
26 - 30 years old	59	23.3	23.3	48.2
31 - 45 years old	74	29.2	29.2	77.5
46 - 50 years old	36	14.2	14.2	91.7
51 and above	21	8.3	8.3	100.0
Total	253	100.0	100.0	

Source: Research data (2017).

Table 4.2 summarises the distribution of participants according to age. Almost half (48.2%) of the primary respondents were younger than 30 years. Some 29.2% (74) were aged 31 to 45 years of age. Only 22.5% (57) were 46 and older. One can conclude that from the age groups, the age category 31-45 years had more participants compared to the other age groups.

### 4.3.1.3 Gender

Table 4. 3 Categorisation of responses: gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
Male	141	55.7	55.7	55.7
Female	112	44.3	44.3	100.0
Total	253	100.0	100.0	

Source: Research data (2017).

There were more male participants compared to females as can be seen in table 4.3, this could be attributed to the fact that as per the E-NaTIS statistics (2017), men have a higher driving licence population at seventy per cent, compared to the females at thirty percent or perhaps the males were more willing to take part in the study than the females.

#### 4.3.1.4 Marital status

Table 4. 4 Categorisation of responses: marital status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	115	45.5	45.5	45.5
	Married	131	51.8	51.8	97.2
	Divorced	5	2.0	2.0	99.2
	Widow/widower	2	.8	.8	100.0
	Total	253	100.0	100.0	

Source: Research data (2017).

Majority (51.8%) of primary respondents indicated that they were married, followed by 45.5% being single whereas 2% were divorced and .8% indicated that they were widow/widowed.

#### 4.3.1.5 Level of education

Table 4. 5 Categorisation of responses: level of education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School	148	58.5	58.5	58.5
	Tertiary	105	41.5	41.5	100.0
	Total	253	100.0	100.0	

Source: Research data (2017).

The majority of the respondents possessed high school education, followed by tertiary education. Perhaps the 0% on primary education could be attributed to the fact that customers at NaTIS One Stop centres are required to complete and sign off application forms hence at the time of the study, one could not find a respondent with such level of education or it could be among those who declined to take part in the study since participation was voluntary.

#### 4.3.1.6 Deliverable: service delivery

The second objective of the study purpose was to analyse the level of service delivery at NaTIS One Stop Centres from the customers' perspective. The ordinal level of measurement was used to allow the respondents to give information about the order of choice. Respondents were expected to rate the level of service delivery based on how they see it.

#### 4.3.1.7 Frequency to NaTIS one stop centres

Table 4. 6 Categorisation of responses: frequency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	41	16.2	16.2	16.2
	Once a week	28	11.1	11.1	27.3
	Once a month	32	12.6	12.6	39.9
	Once in two months	9	3.6	3.6	43.5
	Once in a year	143	56.5	56.5	100.0
	Total	253	100.0	100.0	

Source: Research data (2017).

More than half of the respondents (56.5 per cent) indicated that they visit the Centre once in a year. This could be explained by the various services that the NaTIS One Stop Centres offers. For example, some of the services require the user to return after a day, three days, and twenty-one days or annually depending on what the customer is looking for. Due to the nature of most NaTIS services, the customer must be present when the service is rendered. This is in agreement with Heizer et al., (2011) assertion that most services in the public sector are delivered while the customer is present.

#### 4.3.1.8 Service waiting time

Table 4. 7 Categorisation of responses: waiting time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5 minutes	7	2.8	2.8	2.8
	6 - 10 minutes	4	1.6	1.6	4.3
	21 - 25 minutes	14	5.5	5.5	9.9
	26 - 30 minutes	116	45.8	45.8	55.7
	More than an hour	112	44.3	44.3	100.0
	Total	253	100.0	100.0	

Source: Research data (2017).

Overall two hundred and twenty eight (80 per cent) of the respondents indicated waiting time of 26 minutes to more than an hour. Hill *et al.*, (2011) says that process mapping operations alleviates bottlenecks in the operations that make up the lead time. The information in table 4.8 could be a possible red tape that would warrant management action to reduce the waiting time.

#### 4.3.1.9 Satisfaction with the waiting time

Table 4. 8 Categorisation of responses: satisfaction with waiting time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	39	15.4	15.4	15.4
	No	214	84.6	84.6	100.0
	Total	253	100.0	100.0	

Source: Research data (2017).

Most of the respondents (84.6 percent) that took part in the study were not satisfied with the waiting time, while thirty-nine (15.4 per cent) indicated satisfaction with the

waiting time. Hill *et al.*, (2011) posits that service providers must review the delivery performance thereby comparing and analysing delivery lead times, in so doing improve process reliability and eliminate bottlenecks in the waiting time.

#### 4.3.1.10 Cleanliness at the office

Table 4. 9 Categorisation of responses: cleanliness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	7	2.8	2.8	2.8
	Fair	117	46.2	46.2	49.0
	Good	125	49.4	49.4	98.4
	Very good	4	1.6	1.6	100.0
	Total	253	100.0	100.0	

Source: Research data (2017).

Close to half of the respondents (49.4 per cent) stated that cleanliness was good, with seven (2.8 per cent) of the respondents stating that it was poor. This is in agreement with Cudjoe *et al.*, (2012) assertions that service quality improvements entails knowing what customers think about the service being rendered in order to address variations if any. In this case, there is a general satisfaction on the cleanliness as shown in table 4.9.

#### 4.3.1.11 Staff behaviour

Table 4. 10 Categorisation of responses: staff behaviour

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very poor	2	.8	.8	.8
	Poor	11	4.3	4.3	5.1
	Fair	126	49.8	49.8	54.9
	Good	107	42.3	42.3	97.2
	Very good	7	2.8	2.8	100.0
	Total	253	100.0	100.0	

Source: Research data (2017).

Almost half (49.8 per cent) of the respondents indicated that the staff behaviour was fair with 42.345% (107) stating that it was good. According to Bradley (2011), a service provider instils confidence with the customer when the person at the point of contacts is trustworthy, professional and keeps promises while rendering a service. Thus, it suffices to say that there is room for improvement as far as staff behaviour is concerned.

#### 4.3.1.12 Service attentiveness

Table 4. 11 Categorisation of responses: service attentiveness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very poor	59	23.3	23.3	23.3
	Poor	140	55.3	55.3	78.7
	Fair	23	9.1	9.1	87.7
	Good	25	9.9	9.9	97.6
	Very good	6	2.4	2.4	100.0
	Total	253	100.0	100.0	

Source: Research data (2017).

More than half 55.3% (140) indicated that the service attentiveness was poor with 2.4% (6) of the respondents indicated that the service attentiveness was very good. This according to Kumasey (2014) argues that customer care entails service provision at the right time and place. In this case, table 4.11 indicates that there is room for improvement at NOSCs.

#### 4.3.1.13 Courtesy and friendliness

Table 4. 12 Categorisation of responses: friendliness and courtesy

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Very poor	50	19.8	19.8	19.8
Poor	145	57.3	57.3	77.1
Fair	28	11.1	11.1	88.1
Good	25	9.9	9.9	98.0
Very good	5	2.0	2.0	100.0
Total	253	100.0	100.0	

Source: Research data (2017).

Majority of the respondents (57.3%) indicated that courtesy and friendliness was poor with (2%) of the respondents indicated that courtesy and friendliness was very good. This is in contrast with Carroll (2011)'s argument that service providers ought to invest in customer satisfaction surveys to determine their needs, this is crucial as customers fit in a certain demographic settings. The information in table 4.12 would warrant management action to determine the causes of such dissatisfaction when it comes to courtesy and friendliness at the NOSCs.

#### 4.3.1.14 Efficiency and effectiveness

This section presents the findings of the investigation into the efficiency and effectiveness of NaTIS One Stop Centres on service delivery from the customers' perspective.

Table 4. 13 Categorisation of responses: efficiency and effectiveness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very poor	68	26.9	26.9	26.9
	Poor	140	55.3	55.3	82.2
	Fair	11	4.3	4.3	86.6
	Good	31	12.3	12.3	98.8
	Very good	3	1.2	1.2	100.0
	Total	253	100.0	100.0	

Source: Research data (2017).

More than half (55.3%) of the respondents indicated that efficiency and effectiveness was poor with 1.2% of the respondents stating that efficiency and effectiveness was very good. The information in table 4.13 is a contrast to Kempe's (2012) findings on efficiency in the public sector where it was stated that satisfying the most essential needs of the community with the greatest possible means is encouraged in order uphold public accountability, fairness and reasonableness. Furthermore, Kempe (2012) warns that effectiveness boils down to the extent to which a need has to be satisfied by doing things right the first time. Given the information in table 4.13, customer priorities need to be at the core at NOSC's in order to achieve efficiency and effectiveness.

#### 4.3.1.15 Service information

Table 4. 14 Categorisation of responses: service information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very poor	46	18.2	18.2	18.2
	Poor	132	52.2	52.2	70.4
	Fair	32	12.6	12.6	83.0
	Good	37	14.6	14.6	97.6
	Very good	6	2.4	2.4	100.0
	Total	253	100.0	100.0	

Source: Research data (2017).

Majority of participants (52.2%) indicated that service information was poor with (2.4%) stating that service information was very good. The results are in contrast with Shultz *et al.*, (2009) findings that organisations ought to market their products/ services thereby create interaction between the customer and the service provider. There is room for improvement as far as service information is concerned at NOSCs.

Table 4. 15 Summary of responses on service delivery

Responses	Very poor	Poor	Fair	Good	Very good	Total
Service speed	127(50.2%)	88(34.8)	16(6.3%)	20(7.9%)	2(0.8%)	253(100%)
Cleanliness	0(0%)	7(2.8%)	117(46.2%)	125(49.6%)	4(1.6%)	253(100%)
Staff behaviour	2(0.8%)	11(4.3%)	126(49.8%)	107(42.3%)	7(2.8%)	253(100%)
Services attentiveness	59(23.3%)	140(55.3%)	23(9.1%)	25(9.9%)	6(2.4%)	253(100%)
Courtesy and friendliness	50(19.8%)	145(57.3%)	28(11.1%)	25(9.9%)	5(2.0%)	253(100%)
Efficiency and effectiveness	68(26.9%)	140(55.3%)	11(4.3%)	31(12.3%)	3(1.2%)	253(100%)
Service information	46(18.2%)	132(52.2%)	32(12.6%)	37(14.6%)	6(2.4%)	253(100%)

Source: Research data (2017).

The overall service delivery at the NaTIS One Stop Centre was grouped and summarised to show the occurrences of values: courtesy and friendliness got the highest rating of 57.3 per cent as being poor. Service attentiveness and efficiency and effectiveness got the highest scores. Efficiency and effectiveness got the second highest score of 55.3 per cent as being poor, service information got the third highest rating on poor at 52.2 per cent, service speed got the fourth highest rating of very poor at 50.2 per cent, staff behaviour got the fifth highest rating of 49.8 per cent as fair and lastly cleanliness got the sixth highest rating of good at 49.6 per cent.

#### 4.3.1.15 Hypotheses test analysis

According to Bak (2009), a hypothesis should explain what to expect, it must be clear and understood, tested, measurable and contain independent and dependent variables. In this study, the analysis was done through cross tabulations of the different sets of variables to determine the relationship between certain categorical variables.

A discussion on the categorical service delivery variable of the respondents was compared to respondents' ratings of different services. A decision rule is concluded at 5% level of significance. The null hypothesis is rejected in favour of the alternative one if the p-value from the Chi-Square table is less than the significance level of 5%, the following four hypotheses were formulated to test the relationship between the variables in relation to service delivery at the Centre:

1. **H<sub>0</sub>**: There is no association between a visit to the NaTIS one stop centre and the waiting time at NaTIS One Stop Centre.  
**H<sub>a</sub>**: There is an association between the waiting time at NaTIS One Stop Centre and a visit to the NaTIS One Stop Centre.
2. **H<sub>0</sub>**: There is no association between the frequency of visit to the NaTIS One Stop Centre and staff behaviours.  
**H<sub>a</sub>**: There is an association between the frequency of visit to the NaTIS One Stop Centre and staff behaviours.
3. **H<sub>0</sub>**: There is no association between staff behaviours and waiting time at NaTIS One Stop Centre.

**H<sub>a</sub>:** There is an association between staff behaviours and waiting time at NaTIS One Stop Centre.

4. **H<sub>0</sub>:** There is no association between service speed and waiting time at NaTIS One Stop Centre.

**H<sub>a</sub>:** There is an association between service speed and waiting time at NaTIS One Stop Centre.

#### 4.3.1.16 Relationship between visits to natis one stop centre and waiting time

**H<sub>0</sub>:** There is no association between a visit to the NaTIS one stop centre and waiting time at the NaTIS One Stop Centre.

**H<sub>a</sub>:** There is an association between a visit to the NaTIS One Stop Centre and waiting time at the NaTIS One Stop Centre.

Table 4. 16 Relationship : visits and waiting time

<b>Chi-Square Tests</b>			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25.612 <sup>a</sup>	16	.060
Likelihood Ratio	23.918	16	.091
Linear-by-Linear Association	6.085	1	.014
N of Valid Cases	253		

a. 16 cells (64.0%) have expected count less than 5. The minimum expected count is .14.

Source: Research data (2017).

The P-value = 0.060 which is more than the significance level of 0.05; hence we accept the null hypothesis and conclude that there is no association between the two variables.

The analysis in table 4.16 correlates with Kempe (2012) finding that public organisations are monopolistic in nature. Thus, whether customers wait for long or not, they will still visit the centre to access the service being offered.

**4.3.1.17 Relationship between frequency of visits to natis one stop centre and staff behaviour**

**H<sub>0</sub>:** There is no association between frequency of visit to NaTIS One Stop Centre and staff behaviour.

**H<sub>a</sub>:** There is an association between frequency of visit to NaTIS One Stop Centre and staff behaviour.

Table 4. 17 Relationship: frequency of visits and staff behaviour

<b>Chi-Square Tests</b>			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	38.329 <sup>a</sup>	16	.001
Likelihood Ratio	34.098	16	.005
Linear-by-Linear Association	.397	1	.529
N of Valid Cases	253		

a. 16 cells (64.0%) have expected count less than 5. The minimum expected count is .07.

Source: Research data (2017).

The p-value is 0.001. Here we reject the null hypothesis as the p-value of 0.001 is less than 0.05 and conclude that indeed there is an association between the staff behaviour and the frequency of visits. Customers' visits are influenced by how they are being treated by employees at the Centre. This is in agreement with Machado *et al.*, (2012)'s findings on service encounters, "what happens at the service counter between the customer and the service provider enhances customer experience".

**4.3.1.18 Relationship between staff behaviour and waiting time at natis one stop centre**

**H<sub>0</sub>:** There is no association between staff behaviour and Waiting time at NaTIS One Stop Centre.

**H<sub>a</sub>:** There is an association between staff behaviour and Waiting time at NaTIS One Stop Centre.

Table 4. 18 Relationship: staff behaviour and waiting time

<b>Chi-Square Tests</b>			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	69.367 <sup>a</sup>	16	.000
Likelihood Ratio	42.585	16	.000
Linear-by-Linear Association	6.482	1	.011
N of Valid Cases	253		

a. 18 cells (72.0%) have expected count less than 5. The minimum expected count is .03.

Source: Research data (2017).

The p-value is 0.000. Thus, we reject the null hypothesis since 0.000 is highly significant at 5% and conclude that there is a relationship between customers' waiting time at NaTIS One Stop Centre and staff behaviour. Cook (2008) in the book “**customer care excellence**” concludes that provision of excellent service requires preparation in every aspect. The analysis in table 4.18 shows that customers spend is influenced by how they are treated by the staff.

#### 4.3.1.19 Relationship between service speed and waiting time at natis one stop centre

**H<sub>0</sub>:** There is no association between service speed and waiting time at NaTIS One Stop Centre.

**H<sub>a</sub>:** There is an association between service speed and waiting time at NaTIS One Stop Centre.

Table 4. 19 Relationship: service speed and waiting time

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	186.921 <sup>a</sup>	16	.000
Likelihood Ratio	123.997	16	.000
Linear-by-Linear Association	93.193	1	.000
N of Valid Cases	253		

a. 16 cells (64.0%) have expected count less than 5. The minimum expected count is .03.

Source: Research data (2017).

The p-value of 0.000, here we reject the null hypothesis since 0.000 is highly significant at 5% and conclude that there is a relationship between service speed and waiting time. This means that the service speed influences waiting time. There is correlation with Bradley (2011) assertion that a service provider inspires confidence through ensuring that the service is consistent and reliable through keeping promises and doing things on time.

#### 4.3.1.20 Deliverable: customer satisfaction

The third objective of the study's purpose was to examine the level of customer satisfaction from the customers' perceptions. The ordinal level of measurement was used

to allow the respondents to give information about the order of choice. Respondents were expected to rate the level of service delivery.

#### 4.3.1.21 Overall service outstanding

Table 4. 20 Categorisation of responses: outstanding service level

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	87	34.4	34.4	34.4
Disagree	124	49.0	49.0	83.4
Not sure	17	6.7	6.7	90.1
Agree	23	9.1	9.1	99.2
Strongly agree	2	.8	.8	100.0
Total	253	100.0	100.0	

Source: Research data (2017).

Almost half (49%) of the respondents that took part in the study indicated that they strongly disagreed with the overall service level whereas 0.8% of the respondents indicated that they were strongly in agreement with the overall service level. The results is in sharp contrast with Boshoff *et al.*, (2009) that stated that the organisation's ability to meet customers' expectations is vital for customers' satisfaction. This is evident from the responses in table 4.20 on the number of respondents who strongly disagreed with the overall service level at the Centre that more work needs to be done to meet customers' expectations at the Centres.

#### 4.3.1.22 I will use the centre again

Table 4. 21 Categorisation of responses: who will use the centres again

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	.8	.8	.8
	Not sure	105	41.5	41.5	42.3
	Agree	145	57.3	57.3	99.6
	Strongly agree	1	.4	.4	100.0
	Total	253	100.0	100.0	

Source: Research data (2017).

Majority (57.3%) of the respondents indicated that they will use the One Stop Centre once more whereas 41.5% were not sure. This could be translated that there is disengagement between the NOSCs and customers. Osman *et al.*, (2009) study on **“customer satisfaction in Malaysia: Islamic banking”** found that service organisations who strive to meet customers’ demands effectively and efficiently tend to retain customers thereby sustain the market share. In the case of the NaTIS One Stop Centres, the market share is guaranteed due to lack of competition in the market. These Centres are the only ones in the country assigned to perform such functions in Namibia; perhaps the service monopoly could have influenced the participants’ response.

#### 4.3.1.23 I will recommend the centre to friends

Table 4. 22 Categorisation of responses: will recommend the centres to their friends

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Disagree	26	10.3	10.3	10.3
Not sure	186	73.5	73.5	83.8
Agree	38	15.0	15.0	98.8
Strongly agree	3	1.2	1.2	100.0
Total	253	100.0	100.0	

Source: Research data (2017).

More than seventy percent of the respondents that took part in the study indicated that they were not sure whereas 1.2% were strongly in agreement to recommend to friends

The important aspect in the analysis of the results in table 4.22 is the number of respondents that were not sure. Cook (2008) maintains that customer care focus has the ability to attract and retain customers who in turn are likely to become the spokespersons for the service provider when satisfied with the service through friendship or family cycles. This information would be useful to management to find out as to why customers are not sure to recommend to friends.

#### 4.3.1.24 Service improvement required

Table 4. 23 Categorisation of responses: service improvements required

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not sure	9	3.6	3.6	3.6
	Agree	19	7.5	7.5	11.1
	Strongly agree	225	88.9	88.9	100.0
	Total	253	100.0	100.0	

Source: Research data (2017).

Majority of participants are in strong agreement for service improvements at 88.9 frequencies. This could be interpreted as a service gap that needs urgent management action. Hence, Michel et al., (2008) advised that service providers must know what their customers think about the service in order to address service gaps. The analysis in table 4.23 calls for management action to zoom on the aspects of service that need improvements.

Table 4. 24 Summary of responses : customer satisfaction

Responses	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	Total
The overall service is outstanding	87(34.4%)	124(49.0)	17(6.7%)	23(9.1%)	2(0.8%)	253(100%)
I will use the centre again	0(0%)	2(0.8%)	105(41.5%)	145(57.3%)	1(0.4%)	253(100%)
I will recommend the centre to a friend	0(0%)	26(10.3%)	186(73.5%)	38(15.0%)	3(1.2%)	253(100%)
Improvement required to current service	0(0%)	0(0%)	9(3.6%)	19(7.5%)	225(88.9%)	253(100%)

Source: Research data (2017).

Overall, service outstanding had the highest disagreement score of 49 per cent with the highest score on agreement at 57.3%. Michel *et al.*, (2008) posits that when service failures are not addressed it leads to customer dissatisfaction. Thus, the management of NOSCs might find this analysis useful to mitigate the discomfort.

#### 4.4 Semi-structured interviews

Saunders *et al.*, (2016) further states that managers are more likely to agree to be interviewed rather than complete a questionnaire, especially if the topic relates to their current work. In this case, the key informants were found suitable for this study due to their institutional memory to the subject matter. The researcher posed the typed questions from the notes in order to have control and manage the interview process and confine it to the study topic.

Table 4. 25 Participants' profile

<b>Gender</b>	<b>Management level</b>	<b>Department</b>	<b>Level of education</b>
Male	Senior	Transport regulation	MBA
Male	Senior	Transport regulation	MBA
Male	Middle	Standards	MBA
Male	Senior	Operations	Post graduate diploma
Female	Middle	Operational support	Bachelor's degree

Source: research data (2017).

Table 4. 26 Summary of interviewees' profile

<b>Designation</b>	<b>Years of experience</b>	<b>Number of interviews</b>
Senior Manager: Transport Regulation	>20years	1
Senior Manager: Transport Inspectorate	>20years	1
Manager: Standards	>15years	1
Senior Manager: Operations	>20years	1
Manager: Operational Support	>10years	1

N

5

Source: Research data (2017).

The responses were typed and summarised in one document in order to make sense of the data collected. Participants' responses were compared for similarities amid key themes that emerged during the interview. In so doing, the qualitative data was summarised to get the results of the study.

The participants consisted of top and middle management that dealt directly and indirectly with transportation matters within the Roads Authority. The interviews were conducted in person with key informants to collect data and provide the opportunity to the interviewee to receive feedback and personal assurances about the way the information was going to be used. The semi-structured interview questions focused on the following themes:

Respondent’s designation, gender and level of education, understanding of customer service on service delivery and customer satisfaction, guidelines on provision of service delivery and customer satisfaction levels, control mechanisms on service delivery and monitoring of customer satisfaction levels and challenges facing the NaTIS One Stop Centres on service delivery.

The responses were typed and summarised in one document in order to make sense of the data collected. Participants’ responses were compared for similarities amid key themes that emerged during the interview. In so doing, the qualitative data was summarised to get the results of the study.

#### 4.4.1 Categorisation of responses: service delivery

Table 4. 27 Categorisation of responses: service delivery

1. What is your understanding/perception of customer service on service delivery?	
Inductive categories	Responses
Meeting your customers’ expectations	<ul style="list-style-type: none"> <li>○ Meeting customers’ expectations through excellent service delivery</li> <li>○ Meeting customers expectation through quality service delivery</li> <li>○ Meeting customers’ expectations through efficient and effective service delivery</li> <li>○ Meeting customers’ expectations through understanding their demands during service delivery</li> </ul>
2 What is your understanding of service delivery?	
Inductive categories	Responses
Good to excellent	2
Needs improvement	3
Improving service delivery through	<ul style="list-style-type: none"> <li>○ Modernise some service counters to</li> </ul>

modern facilities using e-business	<p>improve the image</p> <ul style="list-style-type: none"> <li>○ Introduce queue management system to manage queues better</li> <li>○ Simplify some processes to create friendly environment</li> <li>○ Continuously improve to ensure that customers get good service</li> <li>○ Allocate more funds on service improvement programs</li> </ul>
3. Are there systems or guidelines in place on the provision of service delivery?	
Inductive categories	Responses
Yes	5
Not sure	0
Customer service charter	<ul style="list-style-type: none"> <li>○ Ensure that customers are aware of the customer charter</li> <li>○ Continually train staff on the customer charter</li> <li>○ Continually review the customer charter to remain relevant</li> </ul>
4. Are there control mechanisms in place to monitor service delivery?	
Inductive categories	Responses
Yes	5
No answer	0
Customer feedback mechanisms	<ul style="list-style-type: none"> <li>○ Customer satisfaction surveys</li> <li>○ Suggestion boxes</li> <li>○ Toll free lines</li> <li>○ National call centre/ customer helpdesk office</li> </ul>
5. What are the challenges facing NaTIS One Stop Centres on service delivery?	
Inductive categories	Responses
Yes	5
No answer	0

Inadequate infrastructure	<ul style="list-style-type: none"> <li>○ NaTIS One Stop Centres are battling to cope with the ever increasing number of customers</li> <li>○ The Roads Authority does not have a dedicated fund for infrastructural development on NaTIS operations</li> <li>○ NaTIS One Stop Centres are prone to long queues</li> <li>○</li> </ul>
Staff turnover	<ul style="list-style-type: none"> <li>○ There is high staff turnover at NaTIS One Stop Centres due to maladministration</li> <li>○ It takes 6 months on average for a new staff member to become productive</li> <li>○ Customers are contributing to staff turnover through bribery.</li> </ul>
Legal requirements	<ul style="list-style-type: none"> <li>○ There are so many legal requirements that a customer must adhere to before a service can be rendered.</li> <li>○ Some customers seem to lack the basic understanding of the requirements</li> </ul>

Source: Research data (2017).

#### 4.4.2 Categorisation of responses: customer satisfaction

Table 4. 28 Categorisation of responses: customer satisfaction

1. What is your understanding of customer satisfaction?	
Inductive categories	Responses
Exceeding customers' expectations	<ul style="list-style-type: none"> <li>○ Follow up on customers to get their views</li> <li>○ Focus on the small things that makes customers' happy</li> <li>○ Collect customer feedback</li> <li>○ Invest in developing your employees to give good service</li> </ul>
2. What is the customer satisfaction at NaTIS One Stop Centres at the moment?	
Inductive categories	Responses
Good to excellent	2

Needs improvement	3
Meeting customers' perception	<ul style="list-style-type: none"> <li>○ Quality of service affected by increased number of NaTIS users</li> <li>○ NaTIS Centres are unable to cope with the ever-growing demands of services</li> <li>○ There is a need to upgrade facilities to accommodate more customers</li> <li>○ Customers don't understand the nature of the NaTIS environment</li> </ul>
3. Are there control mechanisms to monitor customers' satisfaction levels?	
Inductive categories	Responses
Yes	5
No answer	0
Customer feedback mechanisms	<ul style="list-style-type: none"> <li>○ Improve on making quality service as core</li> <li>○ Monitoring customers interactions with frontline staff</li> <li>○ Ask customers' experience of the service</li> <li>○ Provide continuous feedback to measure results and build relationships with customers</li> </ul>

Source: Research data (2017).

## 4.5 Summary of the findings

The study had three objectives and these are; efficiency and effectiveness of NaTIS One Stop Centres on operations, analysis of service delivery at NaTIS One Stop Centres from the customers' perspective and the examination of the customer satisfaction level at NaTIS One Stop Centres.

### 4.5.1 Survey study

The NOSC's got negative scores on service delivery where majority of the responses diverse between poor to very poor. The same pattern was observed on customer

satisfaction where undesirable responses on strong disagreements to disagreements were recorded.

#### **4.5.2 Semi –structured interviews**

The Roads Authority management seems to grasp the basic understanding of service delivery and meeting customer expectations, but what came out clear from the interviews are challenges facing the NOSC's from management's perspective. There is correlation with customer's responses on lack of information with management's response on cumbersome legal requirements for a customer to access services at NOSC's.

#### **4.5.3 Secondary data**

It is evident that NaTIS One Stop Centres are self-sufficient on operations i.e. the input cost is sustained by the revenue generated at the output as postulated in this study. However, one of the management responses on inadequate infrastructure was attributed to lack of dedicated fund for infrastructural development on NaTIS operations. The impact of this can be seen by the responses of the customers on waiting time, service attentiveness etc.

The study conclusions agree with the findings of Machado *et al.*, (2012) who identified that what happens at the point of contact between the customer and the service provider goes a long way in enhancing customer experience. Machado *et al.*, (2012) settle with Bradley (2011) who posited that when a service provider is reliable, keeps promises and does things right on time; that experience inspires confidence and customer loyalty

translates into customer satisfaction. However; this cannot be said on NOCSs as reflected in the study results and findings.

## **CHAPTER 5 DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS**

### **5. Introduction**

This chapter presents recommendations and conclusions in line with the objectives of the study and identifies the areas for future studies.

#### **5.1 Discussion**

The overall objective of the study was to investigate the efficiency and effectiveness of NaTIS One Stop Centre on operations as far as service delivery is concerned. Moreover, the aims of the study encompassed analysis on the level of service delivery at NOSCs and an evaluation of current levels of customer satisfaction at NOSCs. Efficiency and effectiveness is of vital importance in any service driven organisation like the Roads Authority of Namibia. As stated by Roghanian, *et al.*, (2012), the successful transformation of inputs into outputs within the available or limited resources is construed as efficiency, whereas the ability to attain organisational objectives and goals is qualified as being effective.

The RA management is in agreement that more needs to be done as far as service delivery is concerned. Some of the responses on challenges facing NOSC's on service delivery can be categorised under one theme – legal requirements:

“There are so many legal requirements that a customer must adhere to before a service can be rendered” and

“Some customers seem to lack the basic understanding of the requirements”

Meanwhile on the other hand, the RA's customers when asked about service delivery on service speed, service attentiveness, courtesy and friendliness efficiency and effectiveness and services; it came out clearly from the responses that service delivery was poor to very poor. This shows that there is lack of interaction between NOSC's and the RA's customers. Interaction is vital in this case to the Roads Authority in order to create a platform where customers are aware of the service requirements to enable the NOSC's staff members to provide the service without delays. It seems the concept of efficiency and effectiveness at NaTIS One Stop Centres needs to be inculcated within the Roads Authority to realise the objective of MWTC 2000 project on enhancing efficiency on service delivery. It is essential for RA management to continuously assess itself on service delivery and have clear strategies on how to handle issues of service delivery at NOSC's and respond to the needs of its customers.

The NaTIS One Stop Centres being in a good financial position to transform inputs into outputs, at a reasonable profit. Pertinent issues on service delivery should get attention within the shortest possible time and in so doing score some quick wins in the eyes of

the customers. The study established that NOSC's are sustainable and it makes business sense why MTWC2000 project made a recommendation to assign the function to the Roads Authority. Issues of customer complaints on service delivery will always crop up in any service driven organisation, however what matters most to the service recipient is the response and attention that such complaints receive once brought to the attention of management.

## **5.2 Recommendations**

Based on the findings of the study, the following recommendations are aimed at improving efficiency and effectiveness of NaTIS One Stop Centres when it comes to service delivery:

Establish mechanisms to channel some of the profit generated from the NaTIS operations to service improvements at NaTIS One Stop Centres. In so doing, management will be in a position to address the issue of inadequate infrastructure.

Establish strategies for interacting with customers to gauge their views on service delivery through customer satisfaction surveys.

Invest in skills development initiatives to empower employees with customer care attributes.

Invest in techniques that enhance service delivery, such as automated self-service tools to minimise contact with employees.

Devise strategies that enable the measurement of efficiency and effectiveness of NaTIS One Stop centres in order to respond to the needs of the operations

Invest in public awareness programs to educate customers on service operations to create awareness on service information and give customers the opportunity to critique the service.

### **5.3 Areas for future research**

Since research is a continuous process, similar research may be conducted on areas that were not covered in this study, especially on the privatisation of NaTIS One stop Centres. Further studies should attempt to cover all branches in the country to determine whether the results can be generalised or/and funding model for service development on NaTIS Operations. The research focused on one public sector organisation from the MTWC2000 project in Namibia. Future studies could explore how efficient and effective other public-sector organisations that were established at the same time with the Roads Authority in the country through MTWC2000 are doing.

### **5.4 Conclusions**

The findings established that the Roads Authority's management has an understanding of customer service and service delivery thereby ensuring that service counters are modernised to simplify the processes at NaTIS One Stop Centre that will create a friendly customer service environment. The research established that the Roads

Authority is constrained as far as infrastructure development, staff turnover and the legal requirements that must be met by the customer before a service can be rendered.

The main objective of the study was to investigate the efficiency and effectiveness of NaTIS One Stop Centres when it comes to rendering services using the Roads Authority customers and management staff as a sample. After analysis of the study's findings, the study concludes that the level of efficiency and effectiveness at NaTIS One Stop Centres on operations does not equate to MWTC2000 project recommendations of innovative models of public service delivery that calls for collaborations on public service delivery. However, despite the apparent deviation from the MWTC recommendation on public sector service improvements, The NaTIS One Stop Centres has the potential to provide quality service, given the amount of revenue that is generated from the services offered. The study found that service delivery at NaTIS One Stop Centres needs improvement in areas of service speed, staff behaviour, service attentiveness, courtesy and friendliness, efficiency and effectiveness and service information. The research further revealed that more work needs to be done to appease customers on the overall service delivery through adequate service improvements. All in all, the Roads Authority through the NaTIS One Stop Centres has the sole mandate to render such service in the country, nevertheless it is essential to ensure that basic customer service requirements are adhered to at all times to avoid unnecessary customer complaints that if left unattended might spiral out of control and bring the name of the organisation into disrepute.

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## APPENDICES

### Appendix I: Gate keeper's letter



21 July 2017

#### To whom it may concern

Ms Vionah Nsozi Sikabongo of student number: 201401560 is registered for a Master in Business Administration- Management Strategy at the University of Namibia through the Namibia Business School.

This letter serves to inform you that her research proposal was reviewed and successfully met the University of Namibia requirements.

The research topic is **An investigation into the efficiency and effectiveness of NaTIS One Stop Centres in rendering services: a case study of the Roads Authority of Namibia.**

The student has been granted permission to carry out postgraduate studies research. The University of Namibia has approved the research to be carried out by the student for purposes of fulfilling the requirements of the degree being pursued.

If you have any queries please do not hesitate to contact the Business School at the University of Namibia.

Thank you so much in advance and many regards.

Yours sincerely

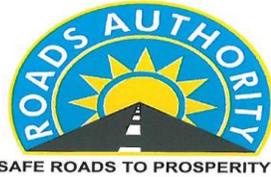
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## Appendix II: Letter of approval



ROADS AUTHORITY  
Private Bag 12030  
Ausspannplatz  
Windhoek  
NAMIBIA

Our Ref.:2/1/5/5

Your Ref.:

Enquiries: Chalwa Kasika  
Telephone: 061-284 7174  
Fax: 061-284 7652  
E-mail: kasikac@ra.org.na

Ms Vionah Sikabongo  
Manager: NaTIS Western  
Roads Authority  
SWAKOPMUND

Dear Ms Sikabongo

**RE: LETTER OF APPROVAL FOR MS VIONAH SIKABONGO TO CONDUCT A RESEARCH STUDY AT ROADS AUTHORITY**

Your letter requesting to conduct research study at the Roads Authority (RA) refers.

Kindly be informed that your request has been granted to conduct research at Swakopmund and Walvis Bay NaTIS offices, as per your research topic.

However, you are cautioned that any collected data should be treated with uppermost confidentiality and solely used for academic purposes.

Please also ensure that your research activity does not result in disruption of operations of the respondents.

Yours sincerely

  
\_\_\_\_\_  
**C Nyati**  
**Senior Manager: Human Resources**



Established in terms of the Roads Authority Act, 1999 (Act 17 of 1999)  
Board of Directors: Mr. B. Katjaerua (Chairperson), Ms. E. Motinga, Ms. L. Brandt, Mr. O.T. Hiveluah, Mr. C. Smith

### **Appendix III: Letter of introduction**

Vionah Nsozi Sikabongo

University of Namibia

Namibia Business School

Private Bag 16004

Windhoek, Namibia.

2 October 2017

Dear Respondent

#### **RE: REQUEST TO TAKE PART IN A RESEARCH STUDY**

I am a graduate student of the University of Namibia. In partial fulfilment of the requirements for the degree of a Master's degree in Business administration, I am carrying out a study on the efficiency and effectiveness of NaTIS One Stop Centres using the Roads Authority of Namibia as a case study.

You have been selected as a voluntary participant for this study. I would like to kindly request that you take some time and read through the questionnaire and answer all the questions.

The information provided will only be used for academic purposes and will be treated with the utmost confidentiality.

Your cooperation, participation and time will be highly appreciated.

Kind regards,

Vionah Nsozi Sikabongo.

## **Appendix IV: Research questionnaire**

### **Section A: Background information**

#### **1. Age group**

- 18-25 years
- 26-30 years
- 31-45 years
- 46-50 years
- 51 and above years

#### **2. Sex**

- Male
- Female

#### **3. Marital status**

- Single**
- Married**
- Divorced
- Widow/Widower

### **Section C: Service delivery**

#### **4. How often do you go to the NaTIS One Stop Centre?**

- Daily

- Once in a week
- Once in a month
- Once in two months
- Once in a year

**5. What is the waiting time for service at the NaTIS One Stop Centre?**

- 5-10 minutes
- 10-15 minutes
- 15-25 minutes
- 25-30 minutes
- more than 1 hour

**6. Are you satisfied with the waiting time?"**

- Yes
- No

**7. How do you rate the NaTIS One Stop Centre in terms of the following?**

<b>Variable</b>	<b>Very poor</b>	<b>Poor</b>	<b>Fair</b>	<b>Good</b>	<b>Very good</b>
<b>Service speed</b>					
<b>Cleanliness</b>					
<b>Staff behaviour</b>					

<b>Service attentiveness</b>					
<b>Courtesy and friendliness</b>					
<b>Efficiency and Effective</b>					
<b>Service information</b>					

**SECTION D: CUSTOMER SATISFACTION**

**8. Please rate your satisfaction level at the NaTIS One Stop Centre**

<b>Variable</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Not sure</b>	<b>Agree</b>	<b>Strongly Agree</b>
<b>The overall service is outstanding</b>					
<b>I will use the Centre again</b>					
<b>I will recommend the Centre to friends</b>					
<b>Improvement required to current service</b>					

**Thank you**

## Appendix V: Language editing certificate



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### LANGUAGE & COPY-EDITING CERTIFICATE

19<sup>th</sup> May 2018

**RE: LANGUAGE, COPYEDITING AND PROOFREADING OF VIONAH NSOZI SIKABONGO'S THESIS FOR THE MASTER OF BUSINESS ADMINISTRATION DEGREE OF THE NAMIBIA BUSINESS SCHOOL OF THE UNIVERSITY OF NAMIBIA**

This certificate serves to confirm that I copyedited and proofread **VIONAH NSOZI SIKABONGO'S** Thesis for the degree of **MASTER OF BUSINESS ADMINISTRATION DEGREE** entitled: **AN INVESTIGATION INTO THE EFFICIENCY AND EFFECTIVENESS OF N&TIS ONE STOP CENTRES IN RENDERING SERVICES: A CASE STUDY OF THE ROADS AUTHORITY OF NAMIBIA**

I declare that I professionally copyedited and proofread 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 and formatted the thesis so that it complies with the University of Namibia's guidelines.

I am a trained language and copy editor and have edited many Postgraduate Diploma, Masters' Thesis, Dissertations and Doctoral Dissertations for students studying with universities in Namibia, Zimbabwe, Swaziland, South Africa and abroad. I have also copy-edited company documents for companies in the region and abroad.

Please feel free to contact me should the need arise.

Yours Sincerely,

The Rev. Dr. Greenfield Mwakipesile



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