THE INFLUENCE OF ONLINE SERVICE QUALITY ON CUSTOMER PERCEPTION OF PERFORMANCE OF THE NATIONAL TRANSPORT AND SAFETY AUTHORITY, KENYA

BY

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DECLARATION

I, the undersigned, declare that this research project is my original work and has not been submitted for a degree in this or any other university.

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SUPERVISOR

This research project has been submitted for examination with my approval as the university supervisor.

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TABLE OF CONTENTS

LIST OF TABLES

ABBREVIATIONS AND ACRONYMS

GDP Gross Domestic Product

GOK Government of Kenya

ICT Information Communication and Technology

NTSA National Transport and Safety Authority

SPSS Statistical Package for Social Sciences

TIMS Transport Integrated Management System

ABSTRACT

Online transactions continue to gain popularity across the world, partly as a result of the rising economic pressures compelling organizations to develop such platforms as a strategy for sustainable corporate performance. In this regard, online service platforms are capable of enhancing linkage between the external and internal environment, and make it possible to facilitate communication and collaboration between the customers and the organization. The National Transport and Safety Authority of Kenya (NTSA) has various direct clientele including the auto-motive drivers and owners, the driving schools, the traffic police department, among others; all of whom demand effective, efficient, and economical service delivery from the organization. The drivers seek timely processing of their driving license, the vehicle owners expect efficient and timely delivery of their ownership documents, the driving schools expect quick registration and processing of provisional driving licenses, while the traffic police department expects quick facilitation from the NTSA for vehicle inspection. NTSA has to be innovative and embrace technology more technology to address the diverse customer needs. The objective of the study was to establish the influence of online service on customer perception of performance of the National Transport and Safety Authority of Kenya; and it was guided by the postulations of both the technology acceptance model, and dynamic capability theory. The population of the study was all the customers of NTSA in Nairobi County. This number estimated to be infinite, hence the Cochran's method of sampling was used to sample 75 customers drawn from the various strata, that is, the different types of customers. Data was analyzed using Statistical Package for Social Sciences, and descriptive and regression analyses were done. The study determined that each of the selected on-line service quality dimensions (customer service, direct transactions, and self-help) had statistically significant influence on customer perception of performance of the NTSA. Generally, the cost minimization dimension had the least dispersed opinion from the respondents. The study recommends that an in-depth study should be done on the challenges facing the adoption of on-line service platforms in other public institutions in Kenya. The study also recommends that the influence of control variables such as the political, economic, and social factors should be examined, since they were not within the scope of the current investigation.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Today, citizens are becoming more and more conscious about their rights to get the required services at their doorstep and both the state and central governments recognize the need to deliver faster and efficient services to ordinary citizens through e-governance which is an effective instrument of administration (Harris et al., 2001). Online transactions continue to gain popularity across the world, partly as a result of the rising economic pressures compelling organizations to develop such platforms as a strategy for sustainable corporate performance (Ong, 2010). The concept of online service refers to the technological interfaces enabling clientele to obtain services free of human interaction with the organization's employees (Meuter et al., 2000), with others such as Harris et al. (2001) arguing that online service is a major antecedent of organizational performance.

The concept of organizational performance, although multidimensional in nature, has been defined by Moullin (2007) and Neely et al. (2002) as "the process of quantifying the efficiency and effectiveness of past actions". Various stakeholders in an organization perceive performance differently depending on their interests in the organization, and the extent to which the interests are met by the organization. Customer perceived performance, therefore, refers to the opinions of clients of an organization as to the degree to which an organization provides effective, efficient, and economical products and services (Ong, 2010).

This study used postulations of e-governance maturity model, technology acceptance model, and dynamic capability theory to establish the influence of online service on customer perceived performance. The e-governance maturity model assumes gradual ICT development. Technology acceptance model attempts to explain perceived usefulness and usage intentions of technology in terms of its social influence and the cognitive instrumental processes involved in its choice among clientele (Harris et al., 2001). Dynamic capabilities theory, on the other hand, postulates that for an organization to attain and sustain good performance, it has to not only have unique resources, but also develop a constellation of systems and processes that are flexible and adaptable (Teece et al., 1997).

Road transport eases mobility of the factors of production, creates employment, and provides revenue to the government. It is against this backdrop that the government of Kenya created the National Transport and Safety Authority (NTSA) to streamline this critical sector of the national economy (NTSA Service Charter, 2018). Accordingly, one of the strategies used by the NTSA to facilitate service delivery is the use of online service platform, the Transport Integrated Management System (TIMS), even though there is no empirical evidence yet relating the same to customer perceived performance of the organization.

1.1.1 Online Service Quality

The concept of e-governance refers to the application of ICT for delivering government services, exchange of information, communication transactions, integration of various stand-alone systems and services between organizations as well as back office processes and interactions within the entire government frame work (Harris et al., 2001).

Through e-governance, promotion of more efficient and effective government is made possible, since it facilitates more accessible government services, allows greater public access to information, and makes government more accountable to citizens. One of the dimensions of e-governance is online service, defined by Beatson et al. (2006) as a type of service where clients of an organization access the services on their own through interaction with technological systems.

The concept has also been defined by Meuter et al. (2000) and Salomann et al. (2006) as technologies enhancing clients to get services in the absence of the employees of an organization. In light of this, Scholars including Lema (2009) have determined that online service is indeed a game changer in corporate practice. In concurrence, others such as Connolly (2005) have identified diverse justifications for the popularity of online service, including customer preference and the cost savings involved. According to Kim et al. (2012) it has become possible for some organizations to expand the scope of their operations by simply providing interfaces between the actual services and the clients.

According to this perspective, there are various reasons for the deployment of online service among organizations. First, most activities relating to customer service have now been availed through technology platforms (Lema, 2009). In this regard, enquiries about accounts, settlement of bills, the list of most frequent questions, and delivery audit trails comprise some of the services now undertaken through online service. Another growing dimension of online service is the direct transactions. Accordingly, customers are facilitated by technology to place delivery orders, and to conduct exchanges through online service platforms.

The third type of online service is the self-help which enables clients to train themselves, trouble shoot, and provide solutions through the use of online platform (Connolly, 2005). Through the various dimensions of online service platforms, it is possible for organizations to interact with their clients, and collaborate with them to enhance product and service innovation (Salomann et al., 2006). As a result, it is possible for an organization to expand its product scope through online service platforms. Online service platforms also make it possible for organizations to reach out to market segments that would ordinarily be difficult to access. In essence, online service platforms can facilitate expansion of the market scope of an organization (Beatson et al., 2006).

1.1.2 Customer Perception of Performance

Customer perceived performance has been defined by Ong (2010) as that which relates to efficiency, effectiveness, financial stability as well as relevance of the organization, from the perspective of a firm's clients. Performance of an organization, from this perspective, is its ability to achieve short term objectives goals by using resources prudently as evaluated by the customers. Effectiveness, from this dimension, means the provision of a product or a service that meets customers' needs while efficiency is about how the organization uses resources to achieve organizational objectives.

According to Schulz and Neely et al. (2002) firm performance measures commonly used include the productivity of the organization, organizational effectiveness and industry rating. Others such as Kim (2012) have explained key success factors in performance which include leadership, culture strategy and coordination. Another tool of measuring performance is the balanced score card which according to Kaplan and Norton (1992) is a set of measures that offer the top management team an integrated view of the

organization. It encompasses financial measures which are historical in nature but complements financial measures with measures on internal processes, customer satisfaction, and the organization's innovation and improvement activities. It looks at a corporation from four perspectives including customer perspective, internal processes, innovation and learning, and financial perspective (Kaplan & Norton, 1996). The limitation of these indicators is that they do not address the public sector performance measurement needs.

Scholars such as K'Obonyo et al. (2011) posit that since organizational performance is the notion of measuring results of a specified process, then altering the procedure or process to adjust the output, boost its efficiency, or effectiveness, one of the most common challenges in the organization is how to measure organizational performance, and especially corporate performance in as perceived by customers. Nevertheless, the current study used the various indicators of organizational performance such as customer satisfaction, process efficiency, and cost minimization since they are more attuned to the interests of customers. A customer is concerned with satisfaction, efficient service process, and cost of service.

1.1.3 National Transport and Safety Authority of Kenya

Established by the National Transport and Safety Authority (NTSA) Act of 2012, the organization is one of the semi-autonomous government agencies, and whose broad objective is the development and implementation of road transport and safety strategies in Kenya. The corporate vision of NTSA is to ensure efficient, reliable, and safe road transport in Kenya, while its mission is to continually improve accessibility and safety of Kenya's road transport system for all users.

The legal mandate of the organization includes to: advise and make recommendations on matters relating to road transport safety; implement policies relating to road transport and safety; plan, manage, and regulate the road transport sector; and ensure the provision of safe, reliable, and efficient road transport service in Kenya (NTSA Service Charter, 2018). Some of the key services delivered by the NTSA in pursuit of its mandate includes: registration and licensing of motor vehicles; motor vehicle inspections and certification; public service vehicle (PSV) regulation; development and implementation of road safety strategies; formulating and reviewing curriculum for driving schools; conducting research and audit on road safety; establishing systems and procedures for and oversee the training of training, testing, and licensing of drivers; as well as facilitating education of the members of public on road safety (NTSA Service Charter, 2018).

One of the strategies used by the NTSA to facilitate service delivery is the use of online service platform, the Transport Integrated Management System (TIMS). Most of the routine services offered by the organization, and that would have required human interaction with the staff are being undertaken by the clients from a remote position (NTSA Service Charter, 2018). The system allows the clients to perform most of the transactions without necessarily visiting the NTSA offices. TIMS is used complemented by the E-citizen, an integrated online service platform deployed by the government of Kenya to enhance public service delivery to the citizens. Despite the deployment of the online service platforms, there is no empirical evidence relating the same to the performance of the NTSA.

1.2 Research Problem

The core values around which good governance works are economy, efficiency and effectiveness. Through e-governance, these values are facilitated. Good governance requires a long-term, strategic approach evolved through a consensus process. It also requires a long-term perspective on what is needed for sustainable human development. Essentially, e-governance connects the citizen and government with ease and speed and hence has a pivotal role in the governance agenda. Online service platforms are capable of enhancing linkage between the external and internal environment (Salomann et al., 2006). Online platforms make it possible to facilitate communication and collaboration between the customers and the organization (Beatson et al., 2006).

The NTSA has various direct clientele including the auto-motive drivers and owners, the driving schools, the traffic police department, among others; all of whom demand effective, efficient, and economical service delivery from the organization (NTSA Service Charter, 2018). The drivers seek timely processing of their driving license, the vehicle owners expect efficient and timely delivery of their ownership documents, the driving schools expect quick registration and processing of provisional driving licenses, while the traffic police department expects quick facilitation from the NTSA for vehicle inspection. NTSA has to be innovative and embrace technology more technology to address the diverse customer needs (NTSA Service Charter, 2018).

Aiming at a determination of the association between novel technologies and management of information in the hospitality industry in the upscale Croatia and Italy, Saura et al. (2012) concluded that customers in both Croatian and Italian firms demonstrated high satisfaction and intention to recommend the firms.

Still greater scores were obtained for the Croatian compared to the Italian organization. This study was however conducted in a more technologically savvy nation context. The study also focused on new technologies in general, with customer-firm interaction interface not forming part of the study. A study by Jo Bitner et al. (2000) focused on the correlation between online service platforms and level of customer satisfaction in the United States of America. The study however used a non-parametric method of analysis, hence there may be need to replicate a similar study with parametric analytical methods. Similar gaps were identified in the studies by El-Said (2013) and Salem (2014), both of which had the same conceptual and methodological scope, but were done in Egypt.

Ondego and Moturi (2016) focused on the evolution of the E-Citizen, an integrated online service platform deployed by the government of Kenya to enhance public service delivery to the citizens. This was a survey of the government Ministries, hence the design did not allow in-depth analysis of the situation at the NTSA, one of the agencies in the Ministry of Transport. Asingo and Mitulla (2007) determined that lack of legal compliance was a major impediment to the alleviation of road carnage in Kenya. Even though it came up with sound empirical findings, the use of online service, and its influence on performance of the NTSA of Kenya was not part of its scope. The current study, consequently, sought to answer the question: What is the influence of online service on customer perception of performance of the National Transport and Safety Authority of Kenya?

1.3 Research Objective

The objective of the study was to establish the influence of online service on customer perception of performance of the National Transport and Safety Authority of Kenya.

1.4 Value of the Study

The study provides empirical evidence on the influence of online service on organizational performance. The findings have been compared with the predictions of technology acceptance model and dynamic capabilities theory. This can consequently help refining the theories and can chart direction for further research. In light of this, the findings of the study has provided opportunities for future research priority.

The government of Kenya through the relevant agencies such as the Information, Communication, and Technology Authority (ICTA), would find the study an invaluable source of information for policy development in order to mitigate the transport safety challenges, including related economic loses. In return, the savings from these loses could be put to more productive use.

The findings of the study would also provide new insight for the NTSA board and management to plan, management, and regulate road transport sector in Kenya. Moreover, the board and management of NTSA would find the study an important source of information for the development of strategies for customer satisfaction, cost minimization, and process efficiency.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents theoretical and empirical literature on online service and customer perception of performance concepts. It brings out the postulations of technology acceptance model and dynamic capability theory, their relevance to the study, and weaknesses. The chapter also entails a review of prior studies on the variables of the study. In this regard, the studies have been reviewed in light of their focus, methodology, findings, gaps, and how the current study proposes to fill the gaps.

2.2 Theoretical Foundation

The study was anchored on the e-governance maturity model, technology acceptance model, and dynamic capability theory to establish the influence of online service on customer perceived performance. Whereas the first two attempt to explain perceived usefulness and usage intentions of technology in terms of its social influence and the cognitive instrumental processes involved in its choice among clientele (Harris et al., 2001), the latter postulates that for an organization to attain and sustain good performance, it has to not only have unique resources, but also develop systems and processes that are flexible and adaptable (Teece et al., 1997).

2.2.1 The e-Governance Maturity Model

The e-Governance Maturity Model postulates that e-government applications and projects generally pass through various stages such as publishing of information on the web to carrying out transactions and even complete process re-engineering so as to bring in the true value and benefits of the efforts to the citizens (Beatson et al., 2006). Gartner, an international e-business research consultancy firm, has formulated a four-phase e-governance model which can serve as a reference for governments to position where a project would fit in the overall evolution of an e-government strategy. In each of the four phases, the delivery of online services and use of ICTs in government operations serve one or more of the aspects of e-government: democracy, government, business. In most cases, governments start with the delivery of online information, but soon public demand and internal efficiency ask for more complex services (Ong, 2010).

In some cases the public demand is the driving force; in other cases cost saving aspects for the government lead the change. According to Gartner the e-governance four-phase maturity model is as follows: presence; intake process; complete transaction; and Integration and organizational changes. In each of the four phases, the delivery of online services and use of ICTs in government operations serve one or more of the aspects of e-governance (Ong, 2010). In the first phase, Information, e-governance means being present on the website, providing the relevant information to the public. This phase entails usage of ICT to expand access to government information which is of importance to individuals and businesses. An efficient utilization of internet and communication technologies makes it possible to disseminate government information to a global audience in a fast and convenient manner (Beatson et al., 2006).

The second phase pertains to enhancing public involvement in the process of government functioning (Ong, 2010). Through the use of technology, the interaction between the governments and citizens/businesses can be stimulated and made more effective. This phase alludes to the stage where the government has gone through the full transformation process and all citizen services are being made available online through a single 'virtual' counter round the clock. In other words, in this stage the capacity to instantly access any service in a 'unified package' is provided to the citizen (Beatson et al., 2006).

2.2.2 Technology Acceptance Model

Technology acceptance model (TAM) by Davis (1985) proposes that the use of a system is determined by the application of motivation, which is subsequently impacted by factors external to it, including the system attributes, and abilities. TAM, in its original version, postulated that user motivation can be explained by the perceived ease of use, usefulness, and attitude toward application (Lee et al., 2003). Some researchers claim that TAM may have attracted easy and quick research that deals with acceptance of technology, so much that less attention has been given to the real problem of technology acceptance.

Hence, research on technology acceptance is still on-going, thus, an understanding of its assumptions, strengths, and limitations is important (Chuttur, 2009). The current study used the propositions of technology acceptance model to determine the relationship between online service and organizational performance. The various determinants of technology acceptance proposed by (Davis, 1985) therefore guided the survey. The study, hence, considered the influence of perceived ease of use, usefulness, and attitude towards application on customer perceived performance.

2.2.3 Dynamic Capability Theory

Dynamic capability theory by Teece et al. (1997) postulates that if abilities of a firm are diverse and implicit, imitation by other firms would be made difficult, forming the basis for sustainable customer perception of performance. According to the theory, a firm ought to make its competencies dynamic by utilizing firm-specific resources and abilities (Bogers, 2012). Authors such as Berdine et al. (2008) have come to a conclusion that the company-specific resources and evolutionary pathways outline the company's administrative and firm developments which subsequently explain superior firm performance.

The limitation of dynamic capability theory is that it assumes existence of an equilibrium set of dynamic capabilities and that the latter ought to be the preoccupation of a rational strategist. This is an ideal assumption since capabilities are contingent upon the competitive environment, and which cannot be assumed to be constant. A similar observation was previously made by West et al. (2012). The prediction of this theory is that new strategies, such as online service platforms, tend to be adopted by organizations in attempt to have good performance. The current study, consequently, used the predictions of dynamic capabilities to determine the influence of online service on organizational performance.

2.3 Empirical Literature Review

Whereas there are a few areas of consensus among scholars on the relationship between online service and firm performance, many of the studies have adduced diverse evidence in this respect. Otieno and Iravo (2014) conducted a study on electronic inbound logistics

acquisition and supply chain management efficiency among selected firms in Nairobi County.

The study determined that electronic inbound logistics acquisition had led to significant cost savings due to the reduced staff capacity, and physical material requirements that are typical of traditional procurement strategies. This study focuses on online service and customer perceived performance, which were outside the study scope of Otieno et al. (2014). A study by Tsuma (2014) focused on the global sourcing practices in selected firms in Nairobi County. It established that the companies surveyed practiced three global sourcing strategies, being global outsourcing, contract manufacturing and international purchasing. Even though the study focused on Nairobi County, it had different conceptual focus, being global sourcing practices. Accordingly, the study used exploratory design since no association measures were part of its objectives. The current study used descriptive design to bring the relationship between the two variables.

A study by Salem (2014) focused on the association among knowledge management, innovation and performance of selected organizations in Egypt. It revealed a significant positive association between knowledge management and organizational performance. A similar finding was reported on the relationship between knowledge management and innovation among the firms. The study was, none the less, done in a culturally different country context, which was Egypt. The current study, hence, focused on Kenya to fill the contextual gap.

A study by El-Said (2013) aimed at comparing customer preferences for online and human interaction services in selected firms in Sharma El-Sheikh, Egypt. The findings demonstrated that in most service interactions, customers preferred human to online

service. The study also determined that where preference was on online service, the main justification was the speed of service.

The focus of the study was however on customer preference, hence other dimensions of corporate performance were not included in the analytical model. A more inclusive model would likely yield more reliable findings because past studies have reported mixed results. The current study filled this gap by modelling more dimensions and indicators of online service. In attempt to determine the relationship between tech-innovation and management of information in Croatia and Italy, Saura et al. (2012) concluded that customers in Croatian and Italian organizations demonstrated high satisfaction and intention to recommend the organization.

In this regard, higher scores were obtained for the Croatian compared to the Italian firms. This study was, nevertheless, conducted in a more high-tech nation context. The current study, hence, focused on Kenya and include more online service dimensions and indicators to fill the contextual and conceptual gaps respectively. A study by Jo Bitner et al. (2000) focused on the correlation between online service and level of customer satisfaction in the United States of America. An examination of the correlation between level of incident customer satisfaction and attribution nature was done using chi-square analytical method. The study unearthed a significant correlation between the study variables as indicated by the statistical output: $X2 = 72.36$, $p < .001$. The study however used a non-parametric method of analysis, hence there may be need to replicate a similar study with parametric analytical methods. The current study used relatively large data set to facilitate regression analysis, which is parametric.

2.4 Knowledge Gap

From the empirical literature review, conceptual, contextual, and methodological gaps have been identified. Some studies have focused on a section of the online service concept and organizational performance dimensions. Others have been conducted in high-tech nations, and utilized exploratory research designs that are incapable of determining relationship between variables. Table 2.1 is a summary of the knowledge gaps and proposed ways to fill them in the current study.

Table 2.1 Summary of Knowledge Gap

Author(s) & Year	Area of Study	Findings	Gap	Addressing the Gap
Otieno and Iravo (2014)	Electronic inbound logistics acquisition and supply chain efficiency among selected firms in Nairobi County	Electronic inbound logistics acquisition had led to cost savings due to the reduced staff numbers, and material requirements of traditional procurement strategies	The study focused on the e-procurement and supply chain efficiency, and neither online service nor organizational performance was part of the study	This study focuses on online service and customer perceived performance, which were outside the study scope of Otieno et al. (2014).

Table 2.1 Continued

Tsuma	The global	The firms practiced	The study used	The current

(2014)	sourcing practices in selected firms in Nairobi County	three global sourcing strategies, being global outsourcing, contract manufacturing and international purchasing	exploratory design since no association measures were part of its objectives.	study used descriptive design to bring the relationship between the two variables.
Salem (2014)	Association among knowledge management, innovation and performance	Significant positive association between knowledge management and organizational	The study was, none the less, done in a culturally different country context, which was Egypt.	The current study, hence, focused on Kenya to fill the contextual gap.
El-Said (2013)	Comparing customer preferences for online versus human interaction services in selected firms in Sharm El-Sheikh, Egypt	In most service interactions, customers preferred human interaction to technology based service platforms	The focus of the study was on customer preference, hence other dimensions of corporate performance were not included in the analytical model.	The current study filled this gap by modelling more dimensions and indicators of online service.

Table 2.1 Continued

Saura et al. (2012)	Relationship between new technologies in selected firms in Croatia and Italy	Customers who stayed in both Croatian and Italian firms demonstrated high satisfaction and intention to recommend	This study was conducted in a more technologically savvy nation context	The current study focused on the Kenyan context
Jo Bitner et al. (2000)	Correlation between online service and customer satisfaction in the United States of America	Significant correlation between the study variables as indicated by the statistical output: $X2 = 72.36$, $p < .001$.	The study used a non-parametric method of analysis, there is need to try parametric analytical methods	The current study used relatively large data, hence regression method which is parametric

From Table 2.1, the current study attempted to address the knowledge gaps through carefully chosen variables and their indicators, context, and research design. Some of the studies have also adopted exploratory design, hence the current study used descriptive design so as to bring out the association among the variables in line with the objective.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the methodology adopted in the study has been elaborated. The research design, the study population, sample frame, data collection method, analysis and presentation techniques have all been discussed in this section. The research design is the plan used to guide the study towards achievement of its objectives. Data collection method refers to the manner in which characteristics of the variables were captured, while data analysis consists of data processing activities undertaken to achieve the study objectives. The study used descriptive survey, design and the target population comprises the internal and external clients of NTSA, including the drivers and staff of the organization respectively.

3.2 Research Design

This study used descriptive survey design because it suits the objective of the research: to establish 'how' the various aspects of online service influence customer perception of performance of the NTSA. It was capable of facilitating determination of the central tendency, dispersion, and association between the variable. Primary data was collected at an instant in time, hence the study took a cross-sectional approach. Statistical analysis provided the basis for establishing the probabilistic association between the variables, and drawing of conclusions (Kothari, 2004).

3.3 Population of the Study

The research population comprised the various categories of customers of NTSA. The accessible population of the study consisted of the drivers licensed by the NTSA, the public service vehicle (PSV) owners, and the PSV association leaders in the database of NTSA as at June 30, 2018. According to the NTSA registry, there were 600,000 licensed drivers, 400,000 PSV owners, 2000 PSV associations, and 100 driving schools in Kenya. According to the same source, there were a total of 500 employees in NTSA as at June 30, 2018. The total number of elements in the accessible population was, therefore, 1,002,600 from where an equitable sample was drawn.

3.4 Sample Frame

According to Kothari (2004) knowledge of the source of data gives a clue about what can be done with the data and what inferences can be made from it. This can be individuals, schools, organizations or neighborhoods depending on what is being measured and how it would be measured (Mugenda & Mugenda, 2003). For some studies, the study may entail a large population which may not all be studied. In this case, that portion to be studied as a representative of the whole is called a sample.

But for other studies, the population may be small enough to warrant inclusion of all in the study. The sample frame for the study was the drivers licensed by the NTSA, the public service vehicle (PSV) owners, and the PSV association leaders in the database of NTSA as at June 30, 2018. According to the NTSA (2018), there were 600,000 licensed drivers, 400,000 PSV owners, 2000 PSV associations, and 100 driving schools.

3.5 Sampling Design

Sampling design describes the way in which the sample is selected. Stratified random sampling was used to come up with the sample size as shown in Table 3.1 below. This is due to the fact that the various stakeholders in NTSA are considered heterogeneous, hence, a simple random sample would not be able to adequately represent the population.

Table 3.1 Sample Distribution

Serial Number	Stratum	Quota	Population	Sample Size (10%)
1	Drivers	58%	431	44
2	PSV Owners	37%	285	28
3	PSV associations	4%	24	2
4	Driving Schools	1%	8	1
TOTAL		**100%**	**755**	**75**

From Table 3.1 above the population was divided into groups known as strata and there after simple random sampling was undertaken within each stratum in order to come up with the sample that was used for data collection and analysis (Cooper & Schindler, 2014). In addition, 10% of elements in the population was selected from each strata since 10%-30% is a good representation of the population when the population is than 10,000 and thus 75 individuals were representative of the population.

3.6 Data Collection

The choice of data collection method depends on the research problem under study, the research design and the information to be gathered about the variables. The study used primary data which was collected using a structured questionnaire. Questions were designed to cover all the indicators of online service and customer perception of performance, and they were contained in a questionnaire comprising a set of close-ended questions.

The closed-ended questions were used with the aim of providing more structured responses that facilitated quantitative analysis, and drawing of conclusion. The questionnaire was administered to the customers since they gave opinion on performance of NTSA services. The questionnaire comprised three sections. Section A sought to gather general information about the respondent. Section B concentrated on questions about online service, while section C contained questions about customer perception of performance.

Online service was operationalized using three dimensions, namely: customer service, direct transactions, and self-help uses. This framework has been drawn from Beatson et al. (2006). Customer service dimension refers to the use of on-line platforms to answer queries from the clients. Direct transaction dimension is used to provide actual services that would otherwise been provided through human interaction. Self-help dimension helps the client to in system trouble shooting. The various indicators of each dimension have been used to develop the questionnaire to enhance content validity of the instrument.

3.7 Data Analysis

The study utilized primary data from the chosen respondents who answered the survey questionnaire. Completed questionnaires were edited, coded and entered into Statistical Package for Social Sciences (SPSS), version 20. The below regression model was used;

$$Y = \beta_0 + \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + \varepsilon$$

Where

Y= Performance, measured by customer perception

X1= Quality of customer service, measured by customer perception

X2= Quality of direct transaction, measured by customer perception

X3= Quality of self-help system, measured by customer perception

β_0 = Constant

$\beta_1 \ldots \ldots \beta_3$ = Coefficients of independent variables

ε = error term

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This section comprises the presentation and discussion of the study results. It unveils the response rate, demographic information, as well as the study output in light of the study objectives. Descriptive as well as regression analyses form the basis for discussion of the study findings.

4.2 Response Rate

A total of 75 respondents were sampled in the study, from whom 60 successfully completed and returned the questionnaire, representing 80% response rate. This response rate sufficed for the researcher to draw reasonable conclusions from the study. Mugenda and Mugenda (1999) suggest that a response rate of 70 percent and above is deemed excellent. Based on the assertion, the response rate was considered to be excellent.

Table 4.1: Response Rate

Questionnaire	Frequency	Percentage
Filled and Returned	60	80
Unreturned	15	20
Total	**38**	**100.0**

Source: *Research Findings*

4.3 Demographic Information of Respondents

The respondents were asked to indicate the following demographic data: gender; level of education; NTSA client typology; and NTSA on-line service use status. The findings were as below.

4.3.1 Gender of Respondents

As shown in Table 4.2 below, majority of the respondents were male. They were 45, representing 75% of the respondents. The remaining 15 respondents, representing 25% of the respondents were female.

Table 4.2 Gender of Respondents

Gender	Frequency	Percentage
Male	45	75
Female	15	25
Aggregate	**60**	**100**

Source: *Research Findings*

4.3.2 Level of Education of Respondents

The respondents gave information about their level of education as shown in Table 4.3 below. Table 4.3 demonstrates that majority of the respondents had a maximum of secondary education, followed by those who had bachelor degree; representing 50% and 30% respectively. The minority respondents had primary education, and master degree, each representing 10% of the respondents.

Table 4.3 Level of Education of Respondents

Level of Education	Frequency	Percentage
Primary	6	10
Secondary	30	50
Bachelor	18	30
Master	6	10
Other	0	0
Aggregate	**60**	**100**

Source: *Research Findings*

4.3.3 NTSA Customer Typology of Respondents

The respondents were asked to state the type of clients they were to NTSA. The findings were as shown in Table 4.4 below. Table 4.4 shows that majority of the respondents were personal drivers, representing 50%; followed by PSV drivers, representing 30%. The minority respondents were PSV SACCO leaders, and driving school managers, each representing 5%.

Table 4.4 NTSA Customer Typology of Respondents

Customer	Frequency	Percentage
Personal Driver	30	50
PSV Driver	18	30
PSV Owner	6	10
PSV SACCO Leader	3	5%
Driving School Manager	3	5%
Aggregate	**60**	**100**

Source: *Research Findings*

4.3.4 Experience in Current Positions of Respondents

The respondents were asked to state the years of experience in their current positions. The results were as shown in Table 4.5 below. Table 4.5 demonstrates that majority of the respondents, representing 50%, had more than 6 years' experience in their current positions. This was followed by those who had 5 to years' experience, representing 35% of the respondents. The minority respondents had 1 to 2 years' experience, representing 5%. None of the respondents had less than 1 year experience in their current positions..

Table 4.5 Experience in Current Positions of Respondents

Duration	Frequency	Percentage
Less than 1 Year	0	0
1-2 Years	3	5
3-4 Years	6	10
5-6 Years	21	35
More than 6 Years	30	50
Aggregate	**60**	**100**

Source: *Research Findings*

4.3.5 Use of NTSA On-line Service Status of Respondents

The respondents were asked to state whether they had used the on-line platforms (TIMS) by NTSA for services. The findings were as shown in Table 4.6 below. As shown in Table 4.6, all the respondents had used the on-line service platforms by NTSA to services; representing 100%. This implies that all the respondents were capable of providing valid data with respect to the research objectives.

Table 4.6 Use of NTSA On-line Service Status of Respondents

Status	Frequency	Percentage
Yes	60	100
No	0	0
Aggregate	**60**	**100**

Source: *Research Findings*

4.4 Descriptive Analysis of On-line Service Quality and Customer Perception of Performance

The study sought to determine the influence of on-line service quality on customer perception of performance of the National Transport and Safety Authority, Kenya. The data was collected using a structured questionnaire, with a 5 point rating scale. The central tendency of the responses was measured using the mean, while dispersion was measured using the standard deviation.

The mean measured the extent to which the responses were centered about one point on the scale, while standard deviation measured the degree to which the responses were dispersed from the mean. The statistics are as shown below.

Table 4.7(a) Responses on Customer Service Dimension of On-line Service

Customer Service	Mean	Standard Deviation
I make or handle most enquiries about accounts using the online service platform	2.593	0.145
I make or handle most payments using the online service platform	3.100	0.382
I make use of the frequently asked questions (FAQs) available on the online platform to get information	2.646	0.233
I monitor the progress of service requests through the online platform	2.737	0.221
Aggregate	2.769	0.245

Source: *Research Findings*

Under the customer service dimension, most respondents concurred that their organizations used technology platforms to handle bill payments as shown by the highest mean of 3.100. The poorest score under the customer service dimension was on the use of on-line platform for handling customer queries, at 2.593. Nevertheless, the responses on the use of on-line service for handling customer queries had the least standard deviation. This means that it attracted the most stable responses, compared to those on the use of

online platform for handling bill settlement, which had the highest standard deviation, at 0.382.

Table 4.7(b) Responses on Direct Transaction Dimension of On-line Service

Direct Transactions	Mean	Standard Deviation
I make or handle most transactions using the online service platform	3.378	0.197
I make or handle most communication with NTSA/clients through the online service platform	2.925	0.336
I use an integrated system for most of the services	3.246	0.298
Aggregate	3.183	0.277

Source: *Research Findings*

Under the direct transactions dimension, majority of the respondents tended to agree that they used on-line service platform for NTSA services. This response had the highest mean, at 3.378. The responses on the use of on-line service platform for service acquisition had the least dispersion from the mean, and hence the most stable, with a standard deviation of 0.197.

Table 4.7(c) Responses on Self-Help Dimension of On-line Service

(c) Self-Help	Mean	Standard Deviation
NTSA has provided most customer solutions on the on-line platform such as a booking engine and online payment gateway	2.971	0.354
NTSA has availed an on-line training guide for the customers on self-service	3.192	0.322
NTSA has availed a trouble-shooting system for customers to support on-line self-service	2.863	0.320
Aggregate	**3.009**	**0.332**

Source: *Research Findings*

Under the self-help dimension, majority of the respondents tended to agree that NTSA availed on-line training guide for their clients. This indicator of self-help dimension had a mean score of 3.192. The availability of on-line trouble shooting system to support on-line service use attracted the least favorable response, with a mean of 2.863. The responses on the use of on-line platform for self-help, however, had the most stable responses, with the least standard deviation of 0.320.

The use of on-line service platform for direct transactions attracted the most favorable responses, with an aggregate mean of 3.183, and standard deviation of 0.277; followed by the use of on-line service platform for self-help, with a mean of 3.009 and standard deviation of 0.332; and customer service use, with a mean of 2.769 and standard deviation of 0.245.

Table 4.8 Responses on Customer Perception of Performance

The respondents were asked to rate applicability, in a scale of 1-5, of various statements about customer satisfaction, cost minimization, and service efficiency dimensions of performance of the NTSA. The results were as shown below.

Table 4.8 (a) Responses on Customer Service

Statement	Mean	Standard Deviation
I am satisfied with the performance of the NTSA	3.672	0.236
I have never had major complain about the performance of NTSA	3.363	0.196
I am happy to be associated with NTSA	3.762	0.197
I would recommend the performance standards of NTSA services	3.552	0.170
I am satisfied with the performance of the NTSA	3.672	0.236
I have never had major complain about the performance of NTSA	3.971	0.202
Aggregate	**3.665**	**0.206**

Table 4.8 (a) shows that majority of the respondents tended to agree that customer satisfaction was moderately high at the NTSA. This was shown by the aggregate score of 3.665. The most favorable score under this dimension was on the low levels of complain about customer service, with a mean score of 3.971.

Table 4.8 (b) Responses on Cost Minimization

Statement	Mean	Standard Deviation
My expenses per a unit service at NTSA have reduced in the recent past	3.672	0.213
I save some money due to the efficient services at NTSA	3.638	0.210
My travel costs to NTSA have reduced in the recent past	3.971	0.224
My expenses per a unit service at NTSA have reduced in the recent past	3.691	0.118
Aggregate	**3.767**	**0.166**

Table 4.8 (b) shows that majority of the respondents tended to agree that due tended to agree that due to the use of on-line platforms for service, their costs of service had been relatively lower. This was revealed by the mean score of 3.767. The highest score on the

Various indicators of cost minimization was on reduced travel time for service acquisition, with the highest mean of 3.971, and standard deviation of 0.118.

Table 4.8 (c) Responses on Service Efficiency

Statement	Mean	Standard

		Deviation
The turn-around time for most NTSA services is reasonably low	3.841	0.327
There are limited waiting time for NTSA services	3.043	0.021
I get services from NTSA promptly	3.052	0.391
There is limited time wastage in the process of getting NTSA services	4.015	0.032
Aggregate	**3.488**	**0.193**

Source: *Research Findings*

Under the service efficiency dimension, the respondents tended to be neutral about the efficiency of the NTSA services. This was shown by the aggregate mean score of 3.488. The highest score under this dimension was on the limited time wastage in the acquisition of NTSA services. This indicator of service efficiency had a mean score of 4.015. The most consistent response was on the limited waiting time, with the lowest standard deviation of 0.021.

4.5 Regression Analysis of On-line Service Quality and Customer Perception of Performance

The study aimed at determining the influence of on-line service quality on customer perception of performance of the NTSA, Kenya. Data was collected using a 5-point rating scale, then recoded from nominal to ratio scale through the automatic recoding command in the SPSS.

Various inferential statistics were interpreted in light of the study objectives. R^2 was used to measure the proportion of customer perception of performance explained by each of the dimensions of on-line service quality. The beta factors were used to measure the correlation between each of the dimensions of on-line service quality, and customer perception of performance of the NTSA. The significance of the beta factors

was interpreted at 5% level of significance. The results were as shown below.

4.5.1 Customer Service and Customer Perception of Performance

Table 4.9 Model Summary I

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.889	.790	.736	.22462

Source: *Research Findings*

The findings in Table 4.9 above show that the value of adjusted R squared was 0.736. This implies that 73.6% customer perception of performance variation was could be attributed to the changes in customer service, at 95% degree of confidence. This shows that 73.6% changes in customer perception of performance could be attributed to changes in customer service. It is also evident from the findings above that there was a strong positive correlation between the variables as shown by 0.889.

Table 4.10 Analysis of Variance I

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.293	1	.431	3.814	.001[b]
	Residual	37.968	58	.113		
	Total	39.261	59			

From the analysis of variance statistics in Table 4.10, the regression model had a fit with the data (F=3.814, P < 0.05). This is an indication that customer service had a significant influence on customer perception of performance, at 5% level of significance, since the p-value was 0.1%, which was below 5%.

Table 4.11 Coefficients I

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.508	1.131		1.333	.001
Customer Service	.481	.228	0.203	2.110	.002

As shown in table 4.11 beta coefficient was significant ($\beta = 0.481$, t = 2.110, P < 0.05). This implies that for every unit change in identity there was 48.1% increase in performance.

The below regression equation was established.

$Y = 1.508 + 0.481X_1$

From the above regression equation, it was revealed that if there were no changes in customer service, customer perception of performance would be at 1.508. However, a unit change in customer service would lead to increase in customer perception of performance by a factor of 0.481. At 5% level of significance in conversation was found to significantly influence customer perception of performance. The significance

Table 4.2 Continued   ι 5% threshold.

4.5.2 Direct Transactions and Customer Perception of Performance

Table 4.12 Model Summary II

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.788[a]	.621	.604	.06210

Source: *Research Findings*

The variation in the output variable as a result of changes in input variable is explained by the adjusted R-Squared. Table 4.12 above demonstrates that 60.4% variation in customer perception of performance was explained by changes in direct transactions due to the adoption of on-line service quality. The correlation between direct transactions due to the adoption of on-line service quality was 0.788. This means that a unit change in direct transaction would cause 78.8% change customer perception of performance.

Table 4.13 Analysis of Variance II

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Residual	2.844	1	0.711	4.903	.001[b]
	Regression	10.875	58	0.145		
	Total	13.719	59			

Source: *Research Findings*

The analysis of variance in Table 4.13 above shows that the data had a significance level of 0.1%. This implies that the data was suitable for drawing a conclusion on the

37

attributes of the population since the p-value was below 5%. At 5% level of significance, the F critical was 2.019; F calculated (4.903) was greater than the F critical.

This demonstrates the overall significance of the model. It, therefore, indicates that direct transactions significantly influenced customer perception of performance.

Table 4.14 Coefficients II

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 Constant	1.445	0.453		3.190	.002
Direct Transactions	0.421	0.145	.297	2.903	.003

Source: *Research Findings*

The following equation was established from the above Table 4.14.

$Y = 1.445 + 0.421\ X_2$

Accordingly, if there were no changes in direct transactions, the customer perception of performance score would be at 1.445. However, a unit change in direct transactions led to increase in customer perception of performance by a factor of 0.421. At 5% level of significance in direct transaction through on-line service quality was found to significantly influence customer perception of performance. The significance level for the beta factor was 0.2% which was below the 5% threshold.

4.5.3 Self-Help and Customer Perception of Performance

Table 4.15 Model Summary III

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.881[a]	.776	.724	.01121

Source: *Research Findings*

Table 4.15 shows that the value of adjusted R squared was 0.724. This shows that there was a change of 72.4% on customer perception of performance as a result of variations in the self-help dimension of on-line service quality. This detemination was done at 95% degree of confidence. In this regard, 72.4% changes in customer perception of performance were explained by changes in self-help through on-line service quality. The value of R was 0.881, implying a strong positive correlation between the variables in the study.

Table 4.16 Analysis of Variance III

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Residual	2.844	1	0.745	4.726	.001[b]
	Regression	10.875	58	0.167		
	Total	13.719	59			

Source: *Research Findings*

From Table 4.16 above, the model was found to be robust, with the F value being 4.726, which was less than 2.0196. The p-value was 0.1%, hence less than 5%. This

shows that the self-help dimension of on-line service quality was statistically significant at 5% level of significance.

Table 4.17 Coefficients III

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 Constant	1.213	0.453		3.190	.002
Self-help	0.532	0.197	.014	2.701	.005

Source: *Research Findings*

The regression equation below was determined from the above Table 4.17.

$$Y = 1.213 + 0.532 X_3$$

In this regard, if there were no changes in self-help through on-line service quality, customer perception of performance would be at 1.213. However, a unit change in self-help through on-line service quality led to increase in customer perception of performance by 53.2%.

Self-help through on-line service quality was found to significantly influence customer perception of performance, at 5% level of significance. The significance level for the beta factor was 0.5% which was below the 5% threshold.

4.8.4 Customer Service, Direct Transactions, Self-Help, and Customer Perception of Performance

Table 4.18 Model Summary IV

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.808	.653	. 633	.69440

Source: *Research Findings*

The above Table reveals that the adjusted R squared was 0.633. This demonstrates that there was a change of 63.3% in customer perception of performance as a result of the changes in customer service, direct transaction, and self-help uses of on-line service at 95% confidence interval. This was a demonstration that 63.3% changes in customer perception of performance could be explained by variations in customer service, direct transaction, and self-help uses. The findings in Table 4.18 indicate that there was a strong positive correlation between the variables.

Table 4.19 ANOVA IV

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0.813	3	0.271	3.045	.021[b]
	Residual	2.759	56	0.089		
	Total	3.572	59			

Source: *Research Findings*

From the analysis of variance statistics in Table 4.19 above, the data had significance of 2.1%, an indication that the data was suitable for conclusion drawl on the parameters of the study population. The F critical at 5% level of significance was 2.0196. Since the F calculated (3.045) was above the F critical, the overall model was found to be significant. This is an indication that customer service, direct transaction, and self-help uses significantly influenced customer perception of performance.

Table 4.20 Coefficients IV

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 Constant	1.298	.453		2.865	.006
Customer Service	.237	.160	.198	2.479	.012
Direct Transaction	.231	.126	.245	3.834	.001
Self-help	.239	.145	.008	2.065	.023

$p < 0.05$, dependent variable; customer perception of performance

Source: *Research Findings*

The below regression equation was established from Table 4.20 above.

$$Y = 1.298 + 0.237 X_1 + 0.231 X_2 + 0.239 X_3$$

In this respect, if change in customer service, direct transaction, and self-help uses were each zero, customer perception of performance score would be 1.298. However, a unit change in customer service would lead to increase in customer perception of performance by a factor of 0.237, unit change in direct transaction would lead to increase in customer perception of performance by a factor of 23.1% and a unit change in self-help led to increase in customer perception of performance by 23.9%.

Customer service, direct transaction, and self-help uses of on-line service were each found to significantly influence customer perception of performance at 5% statistical significance.

4.6 Discussion of Findings

The study has a relationship with both theoretical and prior empirical studies. The postulations of technology acceptance model, and dynamic capability theories both have predictions on the influence of on-line service quality on customer perception of performance. Previous empirical studies have also been examined, based on their objectives, and major findings.

4.6.1 Relationship with Theory

Technology acceptance model (TAM) proposes that the use of a system is predictable by the application of motivation, which is subsequently overtly influenced by external factors including the system characteristics, and abilities (Davis, 1985). In the original proposal of TAM, it was postulated that user motivation can be explained by three factors, namely: perceived ease of use, perceived usefulness, and attitude toward use (Lee et al., 2003). The model hypothesizes that the attitude of a user toward a system is a major determinant of system acceptance or rejection. The current study has adduced empirical evidence in support of the postulations of this theory.

The variability among the organizations with respect to adoption of the on-line service dimensions can be attributed to the different rates at which peoples embrace technology. Dynamic capability theory postulates that if abilities of a firm are diverse and implicit, imitation by other firms would be made difficult, forming the basis for sustainably superior organizational performance and customer perception of performance (Teece et al., 1997).

The prediction of this theory is that firms tend to develop dynamic capabilities and continuously develop them according to the changing competitive environment. It also

predicts that new business strategies, such as intensive use of technology, tend to be adopted by organizations in attempt to gain sustainably superior organizational performance and competitive advantage. The current study has adduced empirical evidence in support of the theoretical argument since it has established that that those who embrace on-line service more and likely to have more favorable customer perception of performance.

4.6.2 Relationship with Empirical Literature

Various studies have been done, with some of them have a strong relationship with the current one. A study by Jo Bitner et al. (2000) focused on the correlation between on-line service and level of customer satisfaction in the United States of America. An examination of the correlation between level of incident customer satisfaction and attribution nature was done using chi-square analytical method. The study unearthed a significant correlation between the study variables as indicated by the statistical output: $X2 = 72.36$, $p < .001$.

The study however used a non-parametric method of analysis, hence there may be need to replicate a similar study with parametric analytical methods. The current study has also determined that there is a strong positive relationship between on-line service and customer perception of performance, at 5% level of significance. This finding is similar to that by Jo Bitner et al. (2000). A study by El-Said (2013) aimed at comparing customer preferences for on-line service and HIS in hotels in Sharm El-Sheikh, Egypt. Findings showed that in most service interactions, customers preferred human interaction to technology based service platforms. The study also determined that where preference was on on-line service, the main justification was the speed of

service.   This is more so because various subsequent sources of literature have indicated that the dimensions of on-line service do not impact competitive advantage and performance the same way. A more construct-inclusive model would probably yield more reliable results, considering that past studies have reported mixed results in this regard. The current study has adduced further evidence in support of the findings by El-Said (2013).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter comprises a presentation on summary of the study findings, conclusion and recommendations based on the findings. The summary, conclusion and recommendations have been made in accordance with the objectives, methodological approach, findings, and limitations of the current study.

5.2 Summary of Findings

The study used linear regression to determine the influence of on-line service on customer perception of performance in NTSA, Kenya. The study determined that each of the selected on-line service dimensions had statistically significant influence on customer perception of performance of the NTSA, Kenya. The use of on-line service for direct transactions attracted the most favorable responses; followed by the use of on-line service for self-help; and customer service use. With respect to the customer perception of performance, the cost effectiveness dimension had the most favorable responses; followed by customer service dimension.

Generally, the cost effectiveness dimension had the least dispersed response form the mean. The study further established that if change in customer service, direct transaction, and self-help uses were each zero, customer perception of performance would be at 1.298. A unit change in customer service would lead to increase in business performance by a factor of 0.237, change in direct transaction would lead to increase in customer perception of performance by a factor of 0.231 and change in self-help would lead to increase in customer perception of performance by 23.9%.

5.3 Conclusion

The study has determined that customer service, direct transactions, and self-help uses of on-line service each have statistically significant influence on customer perception of performance of the NTSA, Kenya. The study has also established that the selected dimensions of on-line service have a significant influence on customer perception of performance. The postulations of both technology acceptance, and dynamic capabilities have received empirical backing from this study. The study has also adduced evidence

in support of a few prior studies with which it (current study) has similarities.

5.4 Recommendations

The study recommends that the academics in the field of strategic and operations management, should consider using the empirical evidence adduced to further their research interests. Theorists should also consider the findings of this study to find further empirical foundation in light of the linkages between on-line service and organizational performance. By so doing, further studies in other contexts, including public, private, manufacturing, and service will emanate.

The study further recommends the findings for the development of policies that will be geared towards increasing the sustainability of the road transport in Kenya. The Ministry of Transport in Kenya should apply the study results in decision making since it would assist in developing well-informed policies geared towards the achievement of the Vision 2030, the Big Four agenda, and the sustainable development goals in Kenya.

Finally, the study recommends that the top management team of the NTSA should use the findings for guidance in making necessary changes in their various administrative units to enable them enhance their competitiveness. Specifically, because the study findings have drawn important lessons for success and best practices for the safety of road transport in Kenya against the backdrop of increased road crashes reported in the recent past.

5.5 Limitations
Many limitations were encountered in the course of this study. Some respondents were

uncooperative in filling the questionnaires; this limitation was mitigated by invoking a conversation with the respondent's first to make them at ease. This strategy was used also to reduce the risk of the respondents giving socially-correct responses.

Some respondents also took longer than expected time to fully complete the questionnaire; the researcher however ensured questionnaire submission was done early enough to allow significant time for completion. Early preparation of questionnaires and pre-testing of the same also helped the researcher time for analysis and presentation.

5.6 Areas for Further Research

The study sought to determine the the influence of on-line service on customer perception of performance of the NTSA, Kenya. The study recommends that an in-depth study should be done on challenges facing the adoption of on-line service in other public institutions in Kenya. The study also recommends that the influence of moderating and intervening factors such as the political, economic, and social factors should be examined, since that was not within the scope of this investigation.

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APPENDIX

QUESTIONNAIRE

Section A: Demographic Information

Please respond to the following questions by ticking (✓) appropriate box or writing your answer in the space provided.

1. Please specify your gender. (Please tick one)

    Male ( )

Female ( )

2. What is your highest level of education?

Primary ( )

Secondary ( )

Bachelors ( )

Master ( )

Other ( ) Specify:…………………………………

3. What is your role?

Licensed Driver ( )

Public Service Vehicle (PSV) Owner ( )

PSV Association (SACCO) leader ( )

Driving School Manager ( )

4. For how long have you been in this role?

Less than 1 year ( )

1-2 years ( )

3-4 years ( )

5-6 years ( )

More than 6 years ( )

5. Have you used the online services provided by NTSA in the last one year?

Yes ( )

No   (   )

Section B: Online Service

7. This section seeks to elicit data on the use of Online Services by NTSA. Kindly indicate your degree of disagreement or agreement with the below statements in a scale of 1 to 5, where 1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly agree. Please tick (✔) the most appropriate response from the list provided.

Section C: Organizational Performance

This section seeks to elicit data on the performance of NTSA. Kindly indicate your degree of disagreement or agreement with the below statements in a scale of 1 to 5, where 1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Stongly agree. Please tick (✔) the most appropriate response from the list provided.

(a) Customer Service	1	2	3	4	5
I make or handle most enquiries about accounts using the online service platform					
I make or handle most payments using the online service platform					
I make use of the frequently asked questions (FAQs) available on the online platform to get information					
I monitor the progress of service requests					

through the online platform					
(b) Direct Transactions					
I make or handle most transactions using the online service platform					
I make or handle most communication with NTSA/clients (for NTSA Staff respondent) through the online service plaform					
(c) Self-Help					
Through the NTSA online service, I am able to handle most documentations without travelling to their offices					
NTSA has a working trouble shooting system to support the system users					