SERVICE QUALITY AND OPERATIONAL PERFORMANCE OF REGISTERED AUTO GARAGES IN MOMBASA COUNTY, KENYA

BY

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ABSTRACT

The purpose of this study was to establish the effect of service quality practices on operational performance of auto-garage in Mombasa, Kenya. The study sought to achieve two objectives: To determine the extent of adoption of service quality dimensions' practices by auto-garage in Mombasa County, Kenya and to determine the relation between service quality dimensions and performance of auto-garage in Mombasa County, Kenya. The study achieved a response rate of 90%. Therefore, this response rate was considered excellent and deemed fit for the study. On the extent of adoption of service quality dimensions, Service quality dimensions; Tangible elements, Reliability, Responsiveness, Assurance and Empathy were used to evaluate service quality adoption. All these service quality dimensions were found to be adopted by the auto garages in Mombasa County. They all had a value of 4 on the average means on the Likert Scale. On operational performance, cost, flexibility, quality, speed and dependability all had a value of 4 which implies that they respondents agreed to these. Increase in tangible elements leads to increase in operational performance of registered auto garages in Mombasa. Increase in reliability leads to increase in operational performance of registered auto garages in Mombasa. Increase in responsiveness leads to increase in operational performance of registered auto garages in Mombasa. Increase in assurance leads to increase in operational performance of registered auto garages in Mombasa. Increase in empathy leads to increase in operational performance of registered auto garages in Mombasa. The value of the adjusted R-square implies that 85.2% of the total variance of operational performance is explained by the independent variables of the study. This means that 14.8% of the total variance of operational performance cannot be explained by the model. The study recommends that policy makers should ensure that all auto-garages in Kenya fully adopt service quality practices as one way of ensuring that the government gets maximum revenue from these firms and this will lead to better and improved lives of Kenyans.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The demand for good quality services is one of the most important areas that an organization's need to pay attention in order to survive in the ever-expanding global marketplace Gichagui & Ngugi, 2013). Delivering quality service means conforming to customer expectation in a consistent basis (Lewis & Booms, 1983). A great service quality is a key to improved profitability and has been found to result in increased customer satisfaction, improved sales and profitability (Hasan & Kerr, 2003). Survival of organizations require firm management to identify practices which would help them gain capacity and competitive advantages. Foley, Barton, Busteed, Hulbert, and Sprouster (1997) asserted that firms have responded by using high based strategies, as these are associated with gains in productivity and profitability, and can provide a competitive advantage. Auto-garages are learning to listen to customers and providing them with good products and service to avoid competition. Firms, need to restructure their operational performance in order to gain competitive advantage by looking into the factors that affect their performance. A good operational performance enables a firm to gain competitive advantage, for example enhancing firm's products and services quality (Prajogo, Daniel, Chowdhury, Mesbahuddin, Yeung, Andy & Cheng, 2012).

Service quality can be conceptualized in three theories; customer satisfaction theory, attribute theory and interaction theory, (Chase & Bowen, 1991). The interaction theory where service quality arises when there is collective gain amongst customers and employees and all their needs are met and satisfied, (Klaus, 1985). The interaction theory describes service quality as a gained experience that is shared by all involved parties or participates in the service encounter. The second theory of Customer satisfaction is derived from Parasuraman, Zeithaml and Berry (1985) work examines service quality from customers' perception and experience of performed service compared to their expectations. The customer satisfaction theory focuses more on the satisfaction of the needs and wants of the customers. The third theory is the attribute theory in which service quality is determined by the service provision system attributes with the assumption that management has a significant control of the input attributes that determine service quality. Service

delivery systems require control and coordination to ensure provision of standardized services to all customers (Weiner, 1985). The attribute theory assumes that service quality is a reflection of the attributes of the service delivery system and management has full control of the inputs defining these attributes.

Mombasa registered garages provided services to the locals and even non locals who need repairs services. Several insurance companies have partnered with registered garages for the clients stake, though they have stipulated some guidelines to ensure the registered garages meet the quality standards as perceived to be by them, well it's not enough to look at the service quality alone on the standpoint of the insurer since Customer satisfaction is viewed as influencing repurchase intentions and behavior, which, in turn, leads to an organization's future revenue and profits. According to the Kenya National Bureau of Statistics (KNBS) the volume of imported vehicles between 2005 and 2017 grew at over 300 per cent from 33,000 to over 120,000 units. In addition to the data from KNBS, a bulk of the new and second-hand vehicles imported to Kenya were manufactured in 2011. Almost every city within Kenya has a garage which caters for the automobile sector. The demand for both better services and products within the country has enabled the industry to grow and to survive, the garage will require improving their operational performance to gain competitive advantages.

1.1.1 Service Quality

According to Parasuraman, Zeithaml and Berry (1988) service quality is a measure of how well the service level delivered matches customer expectations. Service quality is a critical determinant of operation performance competitiveness and facilitates an organization to distinguish itself from others (Parasuraman, Zeithaml & Berry, 1991). Conceptual models have been developed to help organizations manage quality problems and plan for quality improvement strategies. Gronroos, (1985) model argue that that consumers usually compare the service they expect with perceptions of the service they receive when evaluating service quality. When customers evaluate service quality they consider the service quality outcome and process of delivering it. For the firms to enhance their performance the mostly adopt the following quality management practices which include; customer focus, human resource, suppliers' management, reporting and quality data, design management, process management and leadership. Service quality management practices

include a set of factors that affect firms' operation performance (Truong, Sampaio, Carvalho, Fernandes &Binh, 2014). These service quality practices enable a firm to attain its main objective of enhancing organization's performance like meeting the needs of the customers at a lower cost. The implementation of service quality management practices will enable organizations to put in place a mechanism that ensures services and products are delivered to the customers' expectations and requirements. This enables the organizations to have a competitive advantage over its competitors, hence better performance.

1.1.2 Operational Performance

Operational performance refers to measurable aspects of the outcomes of an organizations process such as inventory turns, production cycle time and reliability (Johnston and clark, 2001). Firms operational performance management involve aligning all business functions to ensure that they are working together so as to achieve organization objective. To enhance operation performance, the organizations are faced with many challenges when trying to improve their work efficiency and operation costs restructuring. Operation performance can be achieved through by creating a firm culture involving operational excellency, training, equipping the workforce on tools of process improvement, real time process management technologies, and adding into place appropriate measures and controls (Mahmoud and Carlos, 2010). The operations of a business should be effective in the extent to which customers' needs are fulfilled and operations should be efficiency which involve the measure of how economical the use of company resources is.

Various factors can affect the operational performance. These factors include firm process, external orientation, organizational culture, organizational design, firm strategy and culture, supply chain management, customer satisfaction and quality management practices (Truong, Sampaio, Carvalho,Fernandes &Binh, 2014, Oon and Hartini, 2014). Operation performance can be measured based on various indicators which include; reducing procurement costs, reducing overhead costs, reducing production cost, optimizing production, optimizing distribution, optimizing information technology, reducing product complexity, reducing working capital, optimizing after sales services and optimizing capital expenditure (Bottcher and Neuhaus, 2015). A well performing business will have quality products and services, improved production, sales revenue and profit increase and satisfied customers hence a good business performance. The

operation performance seeks to influence the quality of the organizations products and services. Externally quality is an important aspect of customer satisfaction or dissatisfaction while internally quality operations reduce costs and increase dependability.

1.1.3 Service Quality and Operational Performance

Service quality practices can affect the operational performance. Service quality adoption make it possible for an organization to put in place a framework that enables delivery of products and services that meets the needs and wants of customers in a faster and easier way than the competitors (Lakhal, Pasin, & Liman, 2006). For a firm to meet and exceed customer satisfaction it must be effective and efficient in their timely product and service delivery which goes a long way in retaining and attracting new customers. Satisfied customers will certainly increase their products and services purchases which translates to increased throughputs. The relation between service quality and operational performance have been studied by many researchers globally. Service quality is measured by extent to which services delivered meet or exceed customer expectations. According to SERVQUAL model by (Parasuraman, Zeithaml and Berry, 1991) service quality can be evaluated in five dimensions: tangibles, that is, physical facilities, equipment, and appearance of employees and other customers; reliability which include, consistency, dependability, and accuracy of the service performance; responsiveness, that is, employees' willingness to help customers and provide prompt service; assurance that include, competence, courtesy, credibility and security, trustworthiness, confidence, and knowledge of employees; and empathy which include, caring and individualized attention given to customers, easy access, good communication and customer understanding. A firms' operational performance affects customer satisfaction and loyalty significantly with dependability having a stronger influence on customer satisfaction and loyalty which plays an important role in management of services, organization development and success.

1.1.4 Auto Garage in Mombasa County

Mombasa County is one of the 47 counties in Kenya located in the coastal region of Kenya and is made up of six constituencies which include Changamwe, Mvita, Jomvu Kuu, Likoni, Nyali and Kisauni. Almost every town or cities within Kenya has a garage which caters for the automobile sector. The rise of the garage business has been boosted by the fact that most millennial can now

afford vehicles easily due to the affordability and financial options available across the board. The number of imported vehicles between 2005 and 2017 increased by over 300 million from 33,000 to over 120,000 units, according to the Kenya National Statistics Bureau (KNBS). In addition to KNBS data, a bulk of the new and second-hand vehicles imported into Kenya were manufactured in 2011. The demand for better services as well as quality spare parts such as tires within the country has enabled the industry to grow. The Kenyan government has recognized the automotive industry as a key contributor to GDP, as well as offering incentives to the local automotive repair industry as they play an important role in job creation. The only professional body in Kenya that certifies and accredits garages is the Kenya Motor Repairs Association (KEMRA).KEMRA works with various government agencies on a variety of issues, such as setting industry standards, designing legislation and any other matters relating to the motor industry, prior to the establishment of KEMRA's automotive garages and repair shops Were unregulated, exposing customers to repairs by unqualified workers who sometimes use substandard or homemade parts that pose a risk to them. The automotive industry is constantly changing and the cars we have today are not the same as we had 10 years ago, which is why our consumers, taste, and service expectations are always changing.

There is little literature about registered Auto garages in Mombasa, the region boast of high level of repair and maintenance of vehicles, the proximity to the port which is the entry point of all used vehicle imported is also a factor in these business. Registered garages from Mombasa provided services to local residents and even non-local residents who need repair services. Many insurance companies have collaborated with registered garages for the customer's stake, although they have set out some criteria to ensure that registered garages follow the quality standards they consider, well, it is not enough to look at the quality of service from the insurer's point of view alone, because customer satisfaction is seen as affecting repurchase intentions and behaviour. This puts emphasis on direct link with profits, the issues of service quality and customer satisfaction have become a focus to all organization. More and more companies are compelled to assess and improve their service quality in an effort to attract customers and gain competitive advantage in the market (Gilbert & Veloutsou, 2006).

1.2 Research Problem

Service quality is considered a critical determinant of competitiveness that can help an organization to have a competitive advantage. Organizations management is aware of importance of service quality practices in improving operational performance. Customers are the most important asset to an organization who prefer quality products and services and as a result of that organizations are seeking to improve their quality practices so as to have a competitive advantage (Vecchi & Brennan, 2009). Service quality has the ability to transform the operational performance of an organization and meets key customer requirements (Nilsson, Johnson and Gustaffson, 2001). Service quality practices adoption make it possible for an organization to deliver products and services to customers in a faster and better way (Lakhal, Pasin, & Liman, 2006). Mombasa registered garages provided services to the locals and even non locals who need repairs services. Several insurance companies have also partnered with registered garages for the clients stake, though they have stipulated some guidelines to ensure the registered garages meet the quality standards as perceived to be by them, well it's not enough to look at the service quality alone on the standpoint of the insurer since Customer satisfaction is viewed as influencing repurchase intentions and behavior, which, in turn, leads to an organization's future revenue and profits.Due to increased industrialization and demand for vehicles hence need for repair there is need for garage businesses to adopt service quality practices and strategies that will enhance quality of services and performance.

A study by Vargas and Manoochehri, 1994 to assess the operations of US service firms. The study found that effective operational practices in service quality and productivity had a great impact on success of service firms. Timely, prompt and consistent response to customers' needs was a requirement to long term growth and success of all service firms. A study examining the impact of service quality on business performance in Qatar-Based Hotels. The findings revealed significant interrelations of tangibles, reliability, and empathy with financial, nonfinancial, and operational performance of the surveyed hotels. Responsiveness and assurance had a significant interrelation with nonfinancial performance and operational performance respectively (Girish and Nidhi, 2016). A study by Rawashdeh (2018) to explore the relationship between total quality management and firm performance, such as quality, business and organizational performance in Jordanian private airlines. The study results showed that total quality management practices have

a positive and significant impact on business, quality, and organizational performance in Jordanian private airlines hence effective implementation of total quality management practices can results in enhancing airline performance.

Munene (2016) did a study on relationship between service quality and operational performance of public hospitals in Mombasa County. The study concluded that there is a strong relationship between operational performance and service quality where Service quality dimensions' reliability, responsiveness, empathy, assurance and tangibles all had a significant positive relationship with operational performance. Service quality and operational performance in tour operators in Kenya study by Nanyama (2013) found that despite significant level of implementation of various quality components, firms are still unable to attain high operational performance. A study by Rachilo (2013) on internal service quality management and operational performance among commercial banks in Kenya, established that various service measures contributed to operational performance. These studies have not addressed service quality practices in relation to operational performance of auto-garage. Based on various theories and literatures investigated, this study aims to leverage on their findings and their resourceful contributions in the area of service quality and performance in auto-garage to improve on the relevance of the study. This leaves a research gap which this study tends to fill by answering the following research questions; what are the service quality dimensions and operational performance measurements practiced at auto-garages in Mombasa County? What is the relationship between service quality dimensions and operational performance of auto-garages in Mombasa County, Kenya?

1.3 Objectives of the Study

The specific objectives of this study were;

i) To determine the extent of adoption of service quality dimensions' practices by auto-garage in Mombasa County, Kenya.
ii) To determine the relationship between service quality dimensions and operational performance of auto-garage in Mombasa County, Kenya.

1.4 Value of the Study

The findings of this study intend to make a significant contribution to body of knowledge on service quality and its effect on operational performance. Scholars and academicians will find this research prominent as a source of secondary data. The research will contribute to the body of knowledge by extending the service quality in auto-garage. The findings of the study can be used by academicians to carry out studies related to service quality in other countries and organizations at higher levels of organizations to enable them compete effectively in the market to gain a competitive edge and as a reference material.

The research study findings will help auto-garage management team to put in place and teams to understand service quality dimensions and how it affects their customers, and dimensions that ought to be put in place to achieve desired levels of operational performance. The application of the recommendations on relevant service quality dimensions will enhance efficiency and effectiveness and improve auto-garage operational performance.

The study may be useful to operations management policy makers in establishing the best service quality practices so as increase number of customers, customer loyalty, revenue, profits, market share and survival in businesses. Many times businesses fail due to neglect of performance operational issues and strategies.

CHAPTER TWO

LITERATURE REVIEW

2.1Introduction

This chapter reviews the literature on relevant topics under the research study. The chapter include the following; theoretical review, service quality, conceptual framework, empirical review general service quality aspects in garage industry is examined; finally, the summary of findings is drawn and the conceptual framework that supports the variables under study are illustrated.

2.2 Theoretical Review

This section focuses on theories advanced on auto-garage service quality and operational performance. Service quality theory has approved several quality standards. These standards have been documented, and empirically investigated to find out how they affect organizational operational performance. Service quality can be conceptualized based on three theories which include; the interaction theory, the attribute theory and the customer satisfaction theory (Chase & Bowen, 1991).

2.2.1 Interaction Theory

According to Klaus (1985) the interaction theory approach defines service quality as a gained experience that is shared by all involved parties or participates in the service encounter. Quality services are offered when the customers and employees needs are satisfied. Customers' perspective of service quality is a sum of aggregated net significance of benefits perceived in the service encounter which encompasses functional quality and performance delivery. Interaction has been considered as a defining characteristic of all services (Bolton & Saxena-Iyer, 2009). This has been attributed to the fact that services are characterized by simultaneous production and consumption, thereby requiring customer firm interaction. In this study satisfaction of auto garages internal customers is a source of excellent quality since they are enabled to perform their tasks more effectively and efficiently to achieve more external customer. Interaction among the customers will led to immediate production and consumption.

2.2.2 Attribute Theory

The attribute theory assumes that service quality is a reflection of the attributes of the service delivery system and management has full control of the inputs defining these attributes and that stability of a cause determines expectancy shift. According to Weiner (1985), if conditions of service quality process are expected to remain the same then outcomes experienced in the past will be anticipated in the future; with success increasing expectation of future success and failure strengthening expectation of subsequent failures. The attribute theory provides that service quality is assessed by comparison to other similar items or events, so that static terms of 'good or bad quality', as fixed measures, have no firm meaning over time. Juran and Gryna (1988) point out that there is really only either better or worse quality and the comparison basis is often contained within one's past personal experiences and prejudices. This personal history is expressed as expectations: when positive expectations are met, then quality is judged to be acceptable; when expectations are exceeded then quality is judged to be excellent. The theory applies product quality framework to services to determine quality of service delivery. When auto garages products and services failure is perceived to be instigated by steady causes, customers anticipate future dissatisfaction but if perceived to be due to unstable causes, then subsequent satisfaction is expected with future products and services purchases. The management team has a significant influence on service quality as they determine inputs of the service delivery system that define the degree of quality of services of the auto garage' products and services.

2.2.3 Customer Satisfaction Theory

Customer satisfaction theory approach describes service quality as the difference between the expectations and perceptions of the customer in regard to a certain service and the reality perceptions (Hasan & Kerr, 2003). This theory presents more emphasis or primary significance on the perceptions of the customer as opposed to the technical aspects of production. Customer satisfaction theory focuses more on the satisfaction of the needs and wants of the customers. As a result, a large number of entities try as much as possible not only to meet the expectations of their customers in their daily activity but also exceed them in their long term plan. This will require auto garages to develop an operational process that is customer focused while at the same time committing considerable amount of resources that positions clients and meeting their various expectations since they are crucial assets to the financial of an enterprise. Customer satisfaction

theory defines quality of services as a discrepancy between customer anticipations and their perception of quality of services received. Customers' expectations are the basis for satisfaction and perform a pivotal role in forming perception of quality of service received. Consumers' create their own individual benchmark of expectations and rate their satisfaction from perception of service quality received. This theory is customer focused with the customers' definition of quality being the most important, (Berry, Zeithaml & Parasuraman,1985). Customer satisfaction has a great and more consistent influence on purchase auto garage intentions, loyalty and is key to endurance and success of all auto garages in the current competitive environment. Auto garage have to strive to achieve excellent quality image but avoid raising expectations to unrealistic levels, which may lead to increases in preliminary business sales but fosters disappointments and discourages future purchases.

2.3 Service Quality Models and Dimensions

Service quality is the overall assessment of customers towards various services offered by an enterprise, including the attitudes of service personnel and the evaluation of product quality (Chen & Hung, 2003). According to Lin (2004) the service quality is determined by consumer's subjective assessment according to personal experiences and perception. In (Chen & Hung, 2003) defined Service quality management as a holistic management philosophy that focuses on continuous improvement in all functions of a service organization, and it can be achieved only if the service quality concept is utilized from the delivery of service to the after service. Service quality management is most commonly seen as a set of management practices improvement of firm performance. Various practices of service quality have been discussed by various researchers who consider them important for an increased operational performance.

Assessing service quality is quite challenging due to organizations service's unique characteristics, such as intangible, heterogeneous, inseparable, and perishable, there are numerous researchers in the field of service quality and the number is still growing. Service quality can be measured using different models based on various dimensions. Among the most common and popular one include SERVQUAL and SERVPERF. SERVQUAL model developed by Parasuraman, Zeithaml and Berry (1988) provide technique for assessing and managing service quality using ten service quality dimensions which is operationalized into five dimensions which include tangibles, reliability, responsiveness, empathy and assurance where service quality is linked to the concepts

of disconfirmation or gap between customer's perceptions and expectations. Even though the model is intuitively appealing and conceptually sensible, the ability model scores to provide additional information beyond that already contained in the perception component is under doubt. While the perception is definable and measurable in a straightforward manner as the customers' belief about service is experienced, expectation is subject to multiple interpretations and as such has been operationalized differently by different researchers.

The conceptual basis of the SERVQUAL scale is confusing with the service satisfaction and suggested to leave the perception alone (Cronin and Taylor, 1992); hence the SERVPERF service quality model is preferred and play SERVQUAL role. SERVPERF model uses perception only questions based on the five dimensions which include tangible elements, responsiveness, reliability, empathy and assurance. The model was proposed by Cronin and Taylor (1992). The model measures SERVQUAL scale outperformed data (Dabholkar, Shepherd and Thorpe, 2000). SERVPERF represents to be more efficient than SERVQUAL (Boulding, Kalra, Staelin and Zeithaml, 1993), because it explains better the variance in an overall measure of service quality. The argument put forward for SERVPERF performance measurement only model is that service quality is a form of customer attitude and performance only measure of service quality is an enhanced means of measuring service quality. They maintained that performance instead of performance minus expectations determines service quality. This study will use SERVQUAL service quality model.

2.3.1 Tangible Elements

Tangibility represents the service physically. It is defined as the appearance of physical facilities, staff appearance and communication materials that are used to provide services for them. Often firms use tangibility to highlight their image and quality. Services are intangible therefore consumers look for noticeable confirmation of the offerings they will receive in the physical environment to form expectations. Customers look for cues such as physical design, décor, signage, stationary and demeanor of staff and other customers to help establish the firms' image and form customer expectations, (Berry, Zeithaml & Parasuraman, 1985).

2.3.2 Customer Responsiveness

Being willingness to help, it is the willingness or readiness to help customers and to provide prompt service. This dimension emphasizes attentiveness and promptness in dealing with customer requests, questions, complaints and problems. The organization needs to communicate with its customers how long they will wait for their queries and concerns to be solved, meet the set time lines and ensure have flexible operations activities to accommodate special requests by their customers. For success organizations need to assess responsiveness from the consumers' perspective as opposed to the firms' perspective to meet their customers' needs and anticipations, (Parasuraman, Zeithaml and Berry, 1988).

2.3.3 Service Reliability

Reliability is the ability to perform promised service accurately on time. It generally means the company delivers on its promises regarding delivery, service provision and problem resolution. Firms should perform its services right the first time, honors its promises, offers services at designated time, within convenient hours and ensure they are dependable in handling customers' problems and concerns. The organization should provide accurate information to its customers, to avoid wasting time and resources correcting mistakes and to instill consistency in all its processes, (Zeithaml, Berry &Parasuraman, 1993).

2.3.4 Customer Assurance

Assurance is inspiring trust and confidence. The employee's knowledge and courtesy and the ability of the firm and its employees to inspire trust and confidence. The level of knowledge, skills and proficiency of personnel in handling complaints and concerns makes customers feel safe and their politeness and respect in handling every transaction instills trust, (Parasuraman, Zeithaml and Berry, 1988).

2.3.5 Customer Empathy

Empathy is treating customers as individuals, a caring, individual attention a firm provides to its customers. Empathy measures the meticulous and individual attention, the accessibility to information, the capacity to listen and to understand needs. Employees should handle customer queries with attention to detail, concern and understanding of the customers' needs and

motivations, (Parasuraman, Zeithaml and Berry, 1988). Small firms use empathy to deliver tailored services as a competitive edge over bigger firms. Understanding customers' needs and efficient communication channels is essential in building relationships with the customers which is vital for the firm's survival as compared to transaction marketing.

2.4 Operational Performance Measurements

Operational performance is the backbone of organizational performance (Salem, 2003). Organizational performance is the capability of an organization to fulfill its mission through governance, excellence and dedication to meeting its goals and objectives. Operational performance on the other hand is the performance of an organization against its set standards such as waste reduction, productivity, cycle time, environmental responsibility and regulatory compliance (O"Brien, 2009). Efficient operating success metrics include: increased financial performance, lead time performance, improved flexibility, consumer unwaveringness, improvement, quality goods, and decrease in stock levels of excess and item/prepare outline improvements (Johnson, 2003). Association organizational performance metrics can use both financial and non-monetary measures, but most organisations have not used a modified framework for money-related and non-monetary variables (Kaplan & Norton,1992). Customer loyalty, efficiency, speed of execution, competitiveness, flexibility, cash flow, market share, creativity and learning are organizational success metrics. Compliance of consumer standards is consistent with consistency. As it is a significant factor on consumer satisfaction and engagement, consistency is a fundamental indicator. Delivery speed is crucial in deciding goods and services for consumers and is significantly influenced by the speed of decision-making and the flow of materials and information in all processes involved in the manufacture of products or services (Slack, Chambers & Johnston, 2010).

2.5 Empirical Review

This details a review of both local and global studies on service quality and operational performance and related studies. An empirical study by Vargas and Manoochehri, 1994 to assess the operations of US service firms. The study found that effective operational practices in service quality and productivity had a great impact on success of service firms. Timely, prompt and consistent response to customers' needs was a requirement to long term growth and success of all service firms. However, the study concludes that an across-the board, integrative effort will be

required to accomplish the tasks demanded from the service managers of the present and the future. A study examining the impact of service quality on business performance in Qatar-Based Hotels. Empirical data were collected through the tourists of ten 5 star hotels in Qatar using the simple random sampling technique. The findings revealed significant interrelations of tangibles, reliability, and empathy with financial, nonfinancial, and operational performance of the surveyed hotels. Responsiveness and assurance had a significant interrelation with nonfinancial performance and operational performance respectively (Girish and Nidhi, 2016). A study by Rawashdeh (2018) to explore the relationship between total quality management and firm performance, such as quality, business and organizational performance in Jordanian private airlines. The study results showed that total quality management practices have a positive and significant impact on business, quality, and organizational performance in Jordanian private airlines hence effective implementation of total quality management practices can results in enhancing airline performance.

Munene (2016) did a research in Mombasa County on the relationship between service quality and organizational efficiency of public hospitals. The study concluded that there is a clear correlation between operational performance and service quality where the efficiency, openness, empathy, assurance and concrete aspects of service quality all have a substantial positive interaction with operational performance.In Nanyama's (2013) Kenya report, service quality and operational efficiency in tour operators found that companies are still unable to achieve high operational performance despite a substantial degree of deployment of different quality components. Rachilo's (2013) research on the management of internal service quality and operational performance among commercial banks in Kenya found that different service measures contributed to operational performance.

2.5 Summary of Literature Review and Research Gap

This study reviewed theories that try to explain why firms adopt and invest more in service quality for better operational performance. From the literature, it can be summarized that many organizations adopt service quality practices to ensure that they manage quality at all functional areas of operation to gain the advantages that come with producing and delivering quality goods and services to their customers. This includes satisfaction of customers and other stake holder

through added value to the organizations goods and services. Some scholars found a relationship between the quality of service and the efficiency of operations. Firms can achieve operational performance by implementing service quality dimensions that area critical to perception of service quality by customers based on literature reviewed in this section. A better understanding these service quality models and dimensions enables a firm to satisfy the needs of their customers and meet their operational performance objectives. There are high expectations for firms to determine the appropriate goods and services and how they expect to receive the firm's offerings as this influences the customers service quality perceptions. A great customer satisfaction with firm offerings leads to loyalty and good corporate image which aids firms in attaining a competitive advantage over other firms in the market. The empirical studies that were reviewed locally are limited and were not based on auto-garage business industry either. This creates an information gap that this study aims to fill by finding out about the OP of service quality in auto garages in Mombasa County, Kenya. The auto-garage business is so vital since it ensures smooth running of the transport industry. It is in this regard that a study on service quality on performance operational of auto-garage was inevitable

2.6 Conceptual Framework

The study investigated how quality service dimensions; reliability, tangibles, assurance, responsiveness and assurance are perceived by car owner's customers and their relationship with OP of auto-garage in County government of Mombasa. The conceptual framework below shows the relationships among the key variables that will be used in the study. The service quality practices collate to operational performance and its implementation will lead to increase in auto-garage business operational performance.

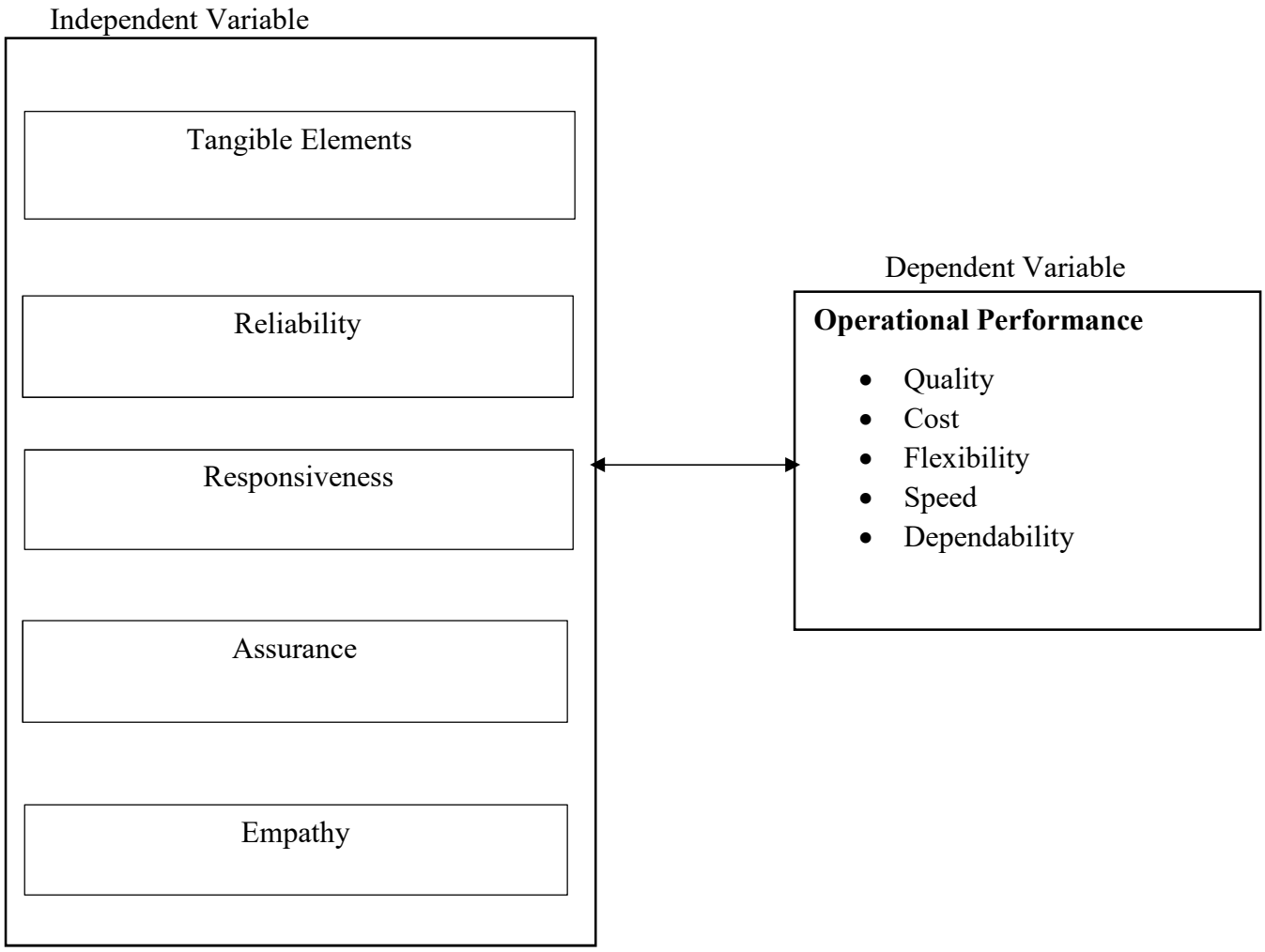


Fig 2.1 Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The section includes descriptions of the methods used in this analysis. The chapter offers information on research design, sample population, data collection, and analysis of data.

3.2 Research Design

The study adopted a census design coupled with cross-sectional survey approach. A census survey was used since the population is small where in this case 50 auto-garages registered between 2015 to 2018 by KEMRA in Mombasa County and approved by Mombasa County Council will be involved in this study. This design was chosen because it describes the relationships that exist between the variables without bias (Kothari, 2003).

3.3 Population of the Study

The population of the study was 50 auto-garages in Mombasa County (Appendix II). This include garages registered by KEMRA and approved by Mombasa County Council which also belong to different insurance company panels e.g. ICEA Lion. According to Mugenda & Mugenda (2003), a population represents a whole collection of individuals, proceedings or substance with observable characteristics.

3.4 Data Collection

The research study used primary data compiled using a formal questionnaire (Appendix I). According to Doryei and Taguchi 2010 a questionnaire is a data collection instrument that best collects data from a large group of people at a reduced cost and within the time convenience of the respondents. The questionnaire items were both open ended as well as closed ended which included three sections; Section A demographic information which include both open and closed questionnaire, Section B service quality dimensions which include closed questions and Section C operational performance which has closed questionnaires.

The questionnaires were administered to the auto-garages operational manager's/service advisor through drop and pick method. The respondents run the day to day activities hence they know the day to day auto-garage operations.

3.5 Data Analysis

Relationship studies have been used to analyze the association between quality services and operating performance. Both qualitative and quantitative analysis were used to evaluate the views of the respondents on the relationship between the quality of service and the performance of the car garages. Data will be check for completion, accuracy and consistency then coding, tabulation and analyzing will be done. All the objectives were analyzed through mean, standard deviation and frequency to determine the Descriptive statistics.

The regression model was as follows;

$Y= \beta_0+ \beta_1X_1+ \beta_2X_2+ \beta_3X_3+ \beta_4X_4+ \beta_5X_5+ \varepsilon$

Where:

Y = Operations Performance Index (dependent variable)

β_0 = Constant

β1, β2, β3, β4 and β5 are measurable component coefficients, durability, sensitivity, assurance and empathy for the overall car garage quality in Mombasa County, Kenya.

X_1 -Tangible elements

X_2 -Reliability

X_3- Responsiveness

X_4- Assurance

X_5-Empathy

ε -Error term

The multiple correlation coefficient R was used to test the strength of the relationship between the independent variables and dependent variable. Coefficient of determination Rsquared was used to explain how much the variability of independent variables of service quality lead to variation in the dependent variable operational performance, (Hair, Black, Babin, & Anderson 2009).

CHAPTER FOUR
DATA ANALYSIS AND PRESENTATION

4.1 Introduction

The purpose of this study was to establish the effect of service quality practices on operational performance of auto-garage in Mombasa, Kenya. The study sought to achieve two objectives: To determine the extent of adoption of service quality dimensions' practices by auto-garage in Mombasa County, Kenya and to determine the relation between service quality dimensions and performance of auto-garage in Mombasa County, Kenya. This section presents analysis of data collected and the study results. The demographic information of respondents was analyzed, followed by analysis of perception and experience of the various service quality dimensions and finally a correlation test done to establish the relationship between service quality and operational performance.

4.2 Response Rate

The research targets a group of 50 auto-garage participants, 45 out of 50 completed in the questionnaire. As shown in Table 4.1, this was a response rate of 90 percent. This was seen as a good example of the sampling community.

Table 4. 1 Response Rate

Response	Frequency	Percentage
Responded	45	90
Not responded	5	10
Total	**50**	**100**

4.3 General Information

The general information sought in this research study were the numbers of years the auto-garage have been in business and if they have a service quality department.

4.3.1 Business Years of Operation

The author tried to find out how many years a car garage has been in operation. The period will decide the experience of auto-garage and the resources it has for its operations. Table 4.2 summarizes the results. Research findings in table 4.2 reveal that 31.1% of the car garage has been in business for 11-15 years; 28.9% of the car garage has been in business for 6-10 years and 16-20 years respectively; 8.9% of the car garage has been in business for 1-5 years, while 2.2% of the car garage has been in business for more than 21 years. This is an indication that most of the car garage was in business for a relatively long period of time and was therefore in a good position to provide relevant information on quality of service and efficiency of operational performance.

Table 4. 2 Duration in Business

Duration (Years)	Frequency	Percent
1-5 Years	4	8.9
6-10 Years	13	28.9
11-15 Years	14	31.1
16-20 Years	13	28.9
Above 21 Years	1	2.2
Total	**45**	**100.0**

4.3.2 Service Quality Department

The author tried to find out if there was a service quality department in an auto shop. The presence of a department of service quality in an auto garage will help to incorporate the activities and functional efficiency indicators of service quality dimensions. The results of the study are as shown in table 4.3. On the availability of a service quality department within the auto garage in Mombasa County, Kenya, the results of the study as shown in Table 4.2 show that 93.3 percent of the auto garage has a service quality department, whereas only 6.7 percent of the auto garage has no service quality department. This means that most of the auto garage has a department of service quality, hence their willingness to provide specific responses to this report.

Table 4. 3 Presence of Service Quality Department

Response	Frequency	Percent
Yes	42	**93.3**
No	3	**6.7**
Total	45	**100.0**

4.4 Diagnostic Tests

Data were subjected to various diagnostic tests prior to the study in order to facilitate subsequent studies. Test for normality were conducted using Skewness and Kurtosis, Test for Autocorrelation was done using Durbin-Watson Statistic, Test for Multicollinearity using Variance Inflation Factors (VIFs) and Test for Heteroscedasticity using Scatterplots. All the values obtained for the various tests are discussed hereunder.

4.4.1 Tests for Normality

Tests of normality can be measured using the Z-values of skewness and kurtosis between -1.96 and + 1.96. Kurtosis and Skewing was used in this study. Table 4.4 shows a measure of skewness 0.991 Standard Error (SE) of 0.501 and Kurtosis measure of -0.665 (SE 0.972). The values for skewness and Kurtosis are all within the span of -1.96 to 1.96. This indicates that the data is slightly bent and Kurtotic and does not differ significantly from normal. The research therefore states that the information are normally distributed.

Table 4. 4 Skewness and Kurtosis

		Statistic	Std. Error
Mean		2.8929	.04422
95% Confidence Interval for Mean	Lower Bound	2.8006	
	Upper Bound	2.9851	
5% Trimmed Mean		2.8810	
Median		2.7500	
Variance		.041	
Std. Deviation		.20266	
Minimum		2.75	
Maximum		3.25	
Range		.50	
Interquartile Range		.25	
Skewness		.991	.501
Kurtosis		-.665	.972

4.4.2 Test for Autocorrelation

Using Durbin-Watson value, autocorrelation was checked. From Table 4.5, the value of Durbin-Watson was 1,783, but there was no autocorrelation as the value was far below the autocorrelation threshold of 7.

Table 4. 5 Durbin-Watson Statistic

Model	Durbin-Watson
1	1.783[a]

a. Predictors: (Constant), Empathy, Reliability, Responsiveness, Tangible Elements, Assurance
b. Dependent Variable: Operational Performance

4.4.3 Test for Multicollinearity

Use variance inflation factors to assess the multicollinearity of predictor variables (VIFs). The undesirable case under which the associations between the independent variables are high is

multicollinearity. If VIF = 10, it occurs in the model. The VIF for Observable Elements was 6,337 from Table 4.6, the VIF for Durability was 1,417, the VIF for Responsiveness was 2,199, the VIF for Certainty was 6,950 and the VIF for Empathy was 2,942.This meant that inflation deviation ratios were smaller than10 for all indicator variables, so there was no multicollinearity.

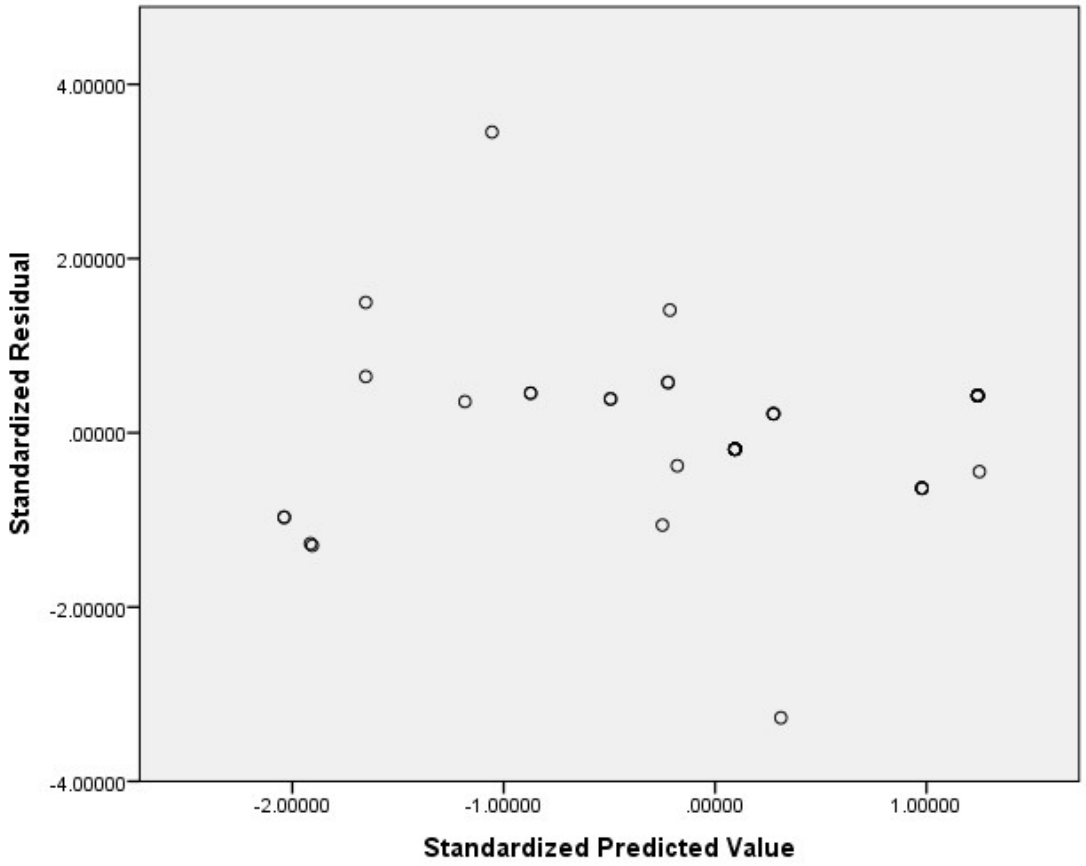
Table 4. 6 Collinearity Statistics

	Collinearity Statistics	
Independent Variables	**Tolerance**	**VIF**
Tangible Elements	.158	6.337
Reliability	.705	1.417
Responsiveness	.455	2.199
Assurance	.144	6.950
Empathy	.340	2.942

4.4.4 Test for Heteroscedasticity

Heteroscedasticity applies to a condition when the variation of a variable is excessive through the set of values expected by a second variable. As the dependent variable (DV) dispersion (and variability) widens or narrows as the independent variable (IV) value increases, a scatterplot of these variables often creates a cone-like structure. It appears that the spots are diffused based on the scatterplot performance of the uniform values in figure 1 below and do not form a simple precise pattern. So it can be concluded that heteroscedasticity is not a problem in the regression model.

Figure 1 Scatter Plot of the Standardized Values



4.5 Descriptive Statistics of the Study Variables

The study aimed to evaluate the degree to which service quality dimensions and the relationship between service quality and operating performance are followed by auto-garage activities in county government of Mombasa. Service quality dimensions; concrete components, durability, openness, assurance and empathy have been used to test service quality acceptance. In this part, the researcher seeks to determine the degree to which the following service quality dimensions are used in the auto garages of Mombasa County, Kenya. It was important for the respondents to demonstrate to what degree they agreed with the perceived extent of the service quality dimensions.

4.5.1 Auto-garage Tangibles

The respondents rated their perception of the following tangibles; auto-garage has up-to-date equipment e.g. wheel balancer, the auto-garage physical facilities whether they are visually appealing e.g. reception, service room, whether employees are well dressed and appear neat i.e. apron and the appearance of the physical facilities is in keeping with the type of services provided. The average mean score was 4.08 which can be rounded off to 4, implying that the respondents agreed on the presence of the tangibles. The standard deviation of 0.714 shows that the responses are not highly varied.

Table 4. 7 Tangibles

Tangibles	Mean	Std. Deviation
The auto-garage has up-to-date equipment e.g. wheel balancer,	4.18	.650
The auto-garage physical facilities are visually appealing e.g. reception, service room	3.82	.960
The employees are well dressed and appear neat i.e. apron	4.31	.557
The appearance of the physical facilities is in keeping with the type of services provided	4.02	.690
Total	**16.33**	**2.857**
Average	**4.08**	**0.714**

4.5.2 Service Reliability

In this section and the results discussed below the degree to which respondents were engaged in the following reliability practices i.e. when the employees/auto-garage agree to do something by a certain deadline, it does so, the employees are compassionate and reassuring when clients have issues and the auto-garage/employees are reliable. For the answers, the total mean score was 3.93, which is 4 when rounded off to the nearest integer. 4 on the Likert scale indicates consent of the claims on reliability made to the respondents. The standard deviation of 0.737 indicates that there was a near relationship between the responses.

Table 4. 8 Reliability

Reliability	Mean	Std. Deviation
When the employees/auto-garage promise to do something by a certain time, it does so	3.71	.869
The employees are sympathetic and reassuring when customers have problems	3.89	.775
The auto-garage/employees are dependable	3.87	.694
The auto-garage/employees provide their services at the time they promise to do so	3.93	.809
The auto-garage keep their records accurately	4.27	.539
Total	**19.67**	**3.686**
Average	**3.93**	**0.737**

4.5.3 Customer Responsiveness

The respondents rated employee willingness to tell customers exactly when services will be performed, whether it is realistic for customers to expect prompt service from the employees, that employees always help the customers by the auto-garage. On responsiveness the average mean score for the responses was 4.03 which imply that the respondents agreed to all these responses, as gauged on the Likert Scale. The standard deviation value of 0.648 shows that the responses were not highly varied.

Table 4. 9 Responsiveness

Responsiveness	Mean	Std. Deviation
The employees tell customers exactly when services will be performed	4.07	.863
It is realistic for customers to expect prompt service from the employees	4.02	.583
The employees always help the customers	4.29	.458
It is a problem if the employees are too busy to respond to customers' requests promptly	3.73	.688
Total	**16.11**	**2.592**
Average	**4.03**	**0.648**

4.5.4 Customer Assurance

The respondents rated customers' ability to trust the employees, customers are able to feel safe in their transactions with the employees, the employees are polite, and whether the employees should get adequate support from the service firm's management to do their jobs well as in table 4.10. On assurance the average mean score was 4.25 which is near 4 on the Likert Scale. This implies that the respondents agreed to the statements posed to them on assurance. The standard deviation of 0.494 shows that the responses were very similar and almost homogenous.

Table 4. 10 Assurance

Assurance	Mean	Std. Deviation
The customers can trust the employees	4.33	.477
The customers are able to feel safe in their transactions with the employees	4.20	.505
The employees are polite	4.24	.435
The employees should get adequate support from the service firm's management to do their jobs well	4.22	.560
Total	**16.99**	**1.977**
Average	**4.25**	**0.494**

4.5.5 Customer Empathy

The respondents rated the individual attention of customers, the personal attention of customers, the needs of their customers, employees have the best interests of their customers at heart, and the employees and the car garage have convenient working hours for all customers as shown in Table 4.11. In terms of empathy, the median mean score for the answers was 4.15, which is equivalent to 4 on the Likert scale, indicating that the respondents agreed on the questionnaire's claims. The standard deviation showed that with a value of 0.617, the responses were not highly varied.

Table 4. 11 Empathy

Empathy	Mean	Std. Deviation
The employees give customers individual attention	4.29	.458
The employees give customers personal attention	3.73	.963
Employees know what the needs of their customers are	4.24	.570
The employees and auto-garage are have operating hours convenient for all customers	4.33	.477
Total	**16.59**	**2.468**
Average	**4.15**	**0.617**

4.6 Operational Performance

The respondents rated operational performance aspects of service quality flexibility of services and evaluated using waiting time for consultation and laboratory tests results waiting time as shown in below

4.6.1 Cost

Various statements were posed to the respondents with regard to cost and the results were tabulated as shown below. The average mean score for the answers was 3.96, which is close to 4 on the Likert scale, indicating that the respondents agreed with most of the claims on the questionnaire regarding the cost to operational efficiency. The standard deviation value of 0.67 does not indicate such a high variance.

Table 4. 12 Cost

Cost	Mean	Std Deviation
To what extent does your auto-garage use cost as service quality for operational performance?	3.91	.633
Does the auto-garage offer low cost of cost of spare parts without compromising the quality?	3.67	.798
The auto-garage applies reasonable mark-ups to their parts and services for the customers to pay fair and affordable prices	4.20	.548
The auto-garage applies the philosophy of "do it right the first Time" to reduce repeat job costs	4.07	.720
Total	**15.85**	**2.70**
Average	**3.96**	**0.67**

4.6.2 Flexibility

Various statements were posed to the respondents with regard to flexibility and the results were tabulated as shown below. The average mean score for the answers was 4.04, which is similar to 4 on the Likert Scale, indicating that the respondents responded to the statements the questionnaire put to them.

Table 4. 13 Flexibility

Flexibility	Mean	Std. Deviation
To what extent does the auto-garage use flexibility as a service quality for operational performance?	3.91	.668
The auto-garage introduces new products in the market time after time	3.89	.714
The auto-garage adopts to shorter delivery schedules given by the customers and works on delivering within the given timelines.	4.09	.596
The auto-garage manages its resources to meet various changing customers' needs	4.27	.447
Total	**16.16**	**2.425**
Average	**4.04**	**0.606**

4.6.3 Quality

Various statements were posed to the respondents with regard to flexibility and the results were tabulated as shown below. The average mean score for the responses was 4.23 which is near 4 on the Likert Scale which shows that the respondents agreed to the statements posed to them by the questionnaire. The responses were almost homogenous as shown by the standard deviation value of 0.510.

Table 4. 14 Quality

Quality	Mean	Std. Deviation
To what extent the auto-garage use quality as a service quality for operational performance?	4.31	.468
The auto-garage continuously improves processes to minimize defects.	4.29	.458
The auto-garage sales vehicles parts and offers services which conforms to customer specifications	4.29	.458
The auto-garage sales vehicles parts and offers services which are of high level of reliability to the customers	4.02	.657
Total	**16.91**	**2.041**
Average	**4.23**	**0.510**

4.6.4 Speed

Various statements were posed to the respondents with regard to speed and the results were tabulated as shown below. The average mean score for the responses for speed was 4.10 which is near 4 on the Likert Scale which shows that the respondents agreed to the statements posed to them by the questionnaire.

Table 4. 15 Speed

Speed	Mean	Std. Deviation
To what extent does the auto-garage use speed/time a service quality for operational performance?	3.91	.668
The auto-garage uses proper queue management system to serve customers to minimize waiting time	4.02	.657
Repair and service quotations are issued to customers in time	4.36	.484
The auto-garage ensures that spare parts are supplied in time	3.98	.543
Employees respond to customer enquiries in time	4.24	.484
Total	**20.51**	**2.836**
Average	**4.10**	**0.567**

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4.6.5 Dependability

Various statements were posed to the respondents with regard to flexibility and the results were tabulated as shown below. As shown by the standard deviation value of 0.567, the responses were not highly varied. The average mean score for the reliability responses was 4.20, which is close to 4 on the Likert Scale, which shows that the respondents agreed with the questionnaire's statements. As shown by the standard deviation value of 0.577, the responses were not highly varied.

Table 4. 16 Dependability

Dependability	Mean	Std. Deviation
To what extent does the auto-garage use dependability as service quality for operational performance?	3.91	.763
The auto-garage offers guaranteed quality products and services to its customers	4.33	.477
The auto-garage has competent technical and mechanic team that offers reliable technical support to its customer	4.09	.701
The auto-garage offers its products and services at stable prices; there are no frequent prices changes	4.27	.447
The firm gives warranty on their products and services	4.42	.499
Total	**21.02**	**2.887**
Average	**4.20**	**0.577**

4.7 Relationship between Service Quality and Operation Performance

4.7.1 Pearson Correlation Coefficient

To test the strength of the relationship between the variables, the Pearson Correlation coefficient was used. The goal is to measure the intensity and orientation of the variables in the relationship. This is shown in Table 4. 14 Underneath. Tangible elements with a Pearson Correlation value of 0.875 were found to correlate positively and strongly with operational performance. The relationship was also significant at a significance level of 5 percent with a p-value of 0.000<0.05. Increasing tangible elements leads to increased operational performance in Mombasa's registered auto garages. Reliability was found to correlate positively but weakly with operating performance with a value of 0.353 for Pearson Correlation. The relationship was also significant at a meaning level of 5 percent with a p-value of 0.017<0.05. Increasing reliability leads to increased operational performance in Mombasa's registered car garages.

Responsiveness with a Pearson Correlation value of 0.747 was found to correlate positively and strongly with operational performance. The correlation was also important at a significance level of 5 percent with a p-value of 0.000<0.05. Increasing responsiveness leads to increased operational performance in Mombasa's registered auto garages. Assurance with a Pearson Correlation value

of 0.888 was found to correlate positively and strongly with operational performance. The relationship was also significant at a significance level of 5 percent with a p-value of 0.000<0.05. Increasing insurance results in increased operating performance of registered car garages in Mombasa. Empathy with a Pearson Correlation value of 0.888 was found to correlate positively and strongly with operational efficiency. The correlation was also important at a sense rate of 5 percent with a p-value of 0.000<0.05. Increasing empathy contributes to improved operational efficiency in Mombasa's registered auto garages.

Table 4. 17 Correlation of the Study Variables

Correlations							
		Tangible Elements	Reliability	Responsiveness	Assurance	Empathy	Operational Performance
Tangible Elements	Pearson Correlation	1	.292	.694**	.913**	.726**	.875**
	Sig. (2-tailed)		.051	.000	.000	.000	.000
	N	45	45	45	45	45	45
Reliability	Pearson Correlation	.292	1	.322*	.259	.507**	.353*
	Sig. (2-tailed)	.051		.031	.086	.000	.017
	N	45	45	45	45	45	45
Responsiveness	Pearson Correlation	.694**	.322*	1	.714**	.631**	.747**
	Sig. (2-tailed)	.000	.031		.000	.000	.000
	N	45	45	45	45	45	45
Assurance	Pearson Correlation	.913**	.259	.714**	1	.733**	.888**
	Sig. (2-tailed)	.000	.086	.000		.000	.000
	N	45	45	45	45	45	45
Empathy	Pearson Correlation	.726**	.507**	.631**	.733**	1	.816**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	45	45	45	45	45	45
OperationalPerformance	Pearson Correlation	.875**	.353*	.747**	.888**	.816**	1
	Sig. (2-tailed)	.000	.017	.000	.000	.000	
	N	45	45	45	45	45	45

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Regression analysis was carried out to determine the linearity of the relationship between the dependent and the independent variables of the study. The results were tabulated and discussed as shown in the subsections here below;

4.7.2 Multiple Regression Model Summary

The adjusted R2as.852 is shown in table 4.18. The adjusted R-square value implies that the model explains 85.2 percent of the total operational performance variance. This means that the model can not explain 14.8 percent of the total variation in operational efficiency.

Table 4. 18 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.932[a]	.869	.852	.29378	1.783

a. Predictors: (Constant), Empathy, Reliability, Responsiveness, Tangible Elements, Assurance

b. Dependent Variable: Operational Performance

4.7.3 Analysis of the Variance of the Study Variables (ANOVA)

The following table 4.16 clearly shows that the ratio of regression to residuals is positive, implying that the dependent and independent variables used in the study were significantly related. It was developed for the table below that Empathy, Reliability, Responsiveness, Tangible Elements and Assurance had a significant impact on operational efficiency as the meaning level was 0.000 at 5 percent meaning level. From the review, the ANOVA table was created and is as Table 4.19.

Table 4. 19 Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	22.379	5	4.476	51.860	.000[b]
Residual	3.366	39	.086		
Total	25.744	44			

a. Dependent Variable: Operational Performance

b. Predictors: (Constant), Empathy, Reliability, Responsiveness, Tangible Elements, Assurance

4.7.4 Coefficients of the Regression Model

From the study, the regression model co-efficients were extracted and presented as below.

$$\mathbf{Y=0.341+0.194X_1+0.06X_2+0.130X_3+0.276X_4+0.225X_5}$$

It means the operational output will be at 0.341 units when the independent variables are all zeros. The operational output increases by 0.194 units as measurable elements increase by one unit. The operating performance increases by 0.006 units when efficiency increases by one unit. Operational performance increases by 0.130 units when responsiveness increases by one unit. Operational performance increases by 0.276 units when insurance increases by one unit. Finally, one unit increases empathy, 0.225 units increase operational performance.

Table 4. 20 Coefficients of the Regression Model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.341	.215		1.589	.120		
Tangible Elements($\mathbf{X_1}$)	.194	.114	.249	1.708	.006	.158	6.337
Reliability($\mathbf{X_2}$)	.006	.092	.005	.068	.046	.705	1.417
Responsiveness($\mathbf{X_3}$)	.130	.077	.145	1.686	.010	.455	2.199
Assurance($\mathbf{X_4}$)	.276	.123	.343	2.248	.030	.144	6.950
Empathy($\mathbf{X_5}$)	.225	.076	.294	2.965	.005	.340	2.942

a. Dependent Variable: Operational Performance(**Y**)

4.8 Discussion of Study Findings

The goal of this research was to evaluate the effect of quality service practices on the operating efficiency of auto garages in county of Mombasa. The goal of the research was to achieve two objectives: to determine the degree to which auto-garage practices in county government of Mombasa, follow the dimensions of service quality, and to determine the relationship in Mombasa County, Kenya between the dimensions of service quality and car garage efficiency. A 90 percent response rate was reached by the study. According to Mugenda and Mugenda, a response rate of 50 percent is acceptable, 60 percent is decent, and 70 percent is exceptional (2012). Thus this response rate was deemed exceptional and considered sufficient for the analysis. To measure the acceptance of service quality, concrete components, reliability, openness, assurance and empathy were used to assess the degree to which dimensions of service quality were adopted.

The Mombasa County car garages are found to accept all these metrics of service efficiency. On average, on the Likert Scale,everyone had a score of 4. Tangible elements were found to correlate positively and strongly with operational performance with a Pearson Correlation value of 0.875. The relation was also significant with a p-value of 0.000<0.05 at 5% level of significance. Increase in tangible elements leads to increase in operational performance of registered auto garages in Mombasa. Reliability was found to correlate positively though weak with operational performance with a Pearson Correlation value of 0.353. The relation was also significant with a p-value of 0.017<0.05 at 5% level of significance. Increase in reliability leads to increase in operational performance of registered auto garages in Mombasa.

Responsiveness was found to correlate positively and strongly with operational performance with a Pearson Correlation value of 0.747. The relation was also significant with a p-value of 0.000<0.05 at 5% level of significance. Increase in responsiveness leads to increase in operational performance of registered auto garages in Mombasa. Assurance was found to correlate positively and strongly with operational performance with a Pearson Correlation value of 0.888. The relation was also significant with a p-value of 0.000<0.05 at 5% level of significance. Increase in assurance leads to increase in operational performance of registered auto garages in Mombasa. Empathy was found to correlate positively and strongly with operational performance with a Pearson Correlation value of 0.888. The relation was also significant with a p-value of 0.000<0.05 at 5% level of significance. Increase in empathy leads to increase in operational performance of registered auto garages in Mombasa. The value of the adjusted R-square implies that 85.2% of the total variance of operational performance is explained by the independent variables of the study. This means that 14.8% of the total variance of operational performance cannot be explained by the model.

CHAPTER FIVE
SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section summarizes the findings from chapter four and also offers conclusions and suggestions for the study based on the study's objectives.

5.2 Summary of Findings

The research obtained a 90 per cent response rate. A response rate of 50 percent is acceptable, 60 percent is good, and 70 percent is exceptional, according to Mugenda and Mugenda (2012). This response level was thus considered excellent and was deemed adequate for the analysis. To measure the quality of service acceptance on the scale of the dimensions of service quality, concrete components, continuity, responsiveness, assurance and empathy were used. The Mombasa County car garages found adoption of all these dimensions of service quality. They all had a value of 4 on the average means on the Likert Scale. On operational performance, cost, flexibility, quality, speed and dependability all had a value of 4 which implies that they respondents agreed to these. This concurs with Munene (2016) who found out that all these were practiced and adopted in public hospitals in Mombasa County.

All independent variables were found to correlate positively with operational performance. Increase in tangible elements increases the operating output of registered auto garages in Mombasa. Increase in reliability increases the operating output of registered auto garages in Mombasa. Increase in responsiveness leads to increase in operational performance of registered auto garages in Mombasa. Increase in assurance increases the operating output of registered auto garages in Mombasa. Increase in empathy increases the operating output of registered auto garages in Mombasa. The value of the adjusted R-square implies that 85.2% of the total variance of operational performance is explained by the independent variables of the study. It means the model is unable to describe 14.8 percent of the total operating output variance.

5.3 Conclusion

The study found that there is a clear positive association between service quality and OP with an improvement in service quality contributing to better operational efficiency. Increasing measurable car garage, service efficiency, service responsiveness, service safety, and service empathy would all result in an increase in operational performance consistent with Munene (2016) and Nair (2016) that perception of service quality has a significant impact on operational performance. On the dimensions of service quality, the auto garages in Mombasa County find measurable components, reliability, sensitivity, assurance and empathy. There was a strong extent of adoption. Consistent with Munyao (2014) who found out that a large number of different service quality practices were adopted by petroleum distribution firms.

5.4 Recommendations

The study recommends that policy-makers ensure that service quality requirements are completely enforced by all Kenyan car garages as one way to ensure that the government collects optimum income from these enterprises, leading to Kenyans' better and better lives.

5.5 Suggestion for Further Research

The study concentrated on auto garages in Mombasa County, Kenya. In order to generalize the findings this study suggests similar studies to be done across all counties in Kenya. Also similar studies can be carried across the whole of East Africa.

The adjusted R squared showed that 14.8% of the variation of operational performance was not covered by the independent variables. This study therefore suggests further research to ascertain what these factors are.

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APPENDICES

Appendix II: List of registered auto-garages in Mombasa County, Kenya.

SNO	NAME OF AUTO GARAGE	ADDRESS
1	BAVARIA GARAGE	MOMBASA, MTWAPA ALONG MSA-MALINDI
2	AUTOZONE MOMBASA GARAGE	MOMBASA,NEXT TO DARAJANI HOTEL
3	CONCORDE MOTORS	MOMBASA, ALONG LINKS ROAD
4	PETER MOTORS	MOMBASA, KING'ORANI
5	JAFFREY MOTORS	MOMBASA, NKRUMAH RD FORT JESUS
6	LIYA MOTORS ENGINEERING CONTRACTORS	MOMBASA, CHANGAMWE
7	MINEKA AUTO WORKS LTD	MOMBASA, KING'ORANI PRISON
8	TOP -WORK GARAGE SERVICE	MOMBASA, KISIMANI
9	TRANS AFRICA MOTORS LTD	MOMBASA
10	DANJU AUTO WORKS	MOMBASA, CLOSE TO KENSIL OFF MOI AVE
11	EURO MODELS K. LTD	MOMBASA
12	COLLY AUTO MECHANICAL SERVICES	MOMBASA
13	MTOPANGA ENTERPRISES	MOMBASA
14	ALJOS & SONS SUPPLIERS	MOMBASA
15	SOLIDARITY AUTO GENERAL SUPPLIERS	MOMBASA
16	JOHNKA ENTERPRISES	MOMBASA
17	CHAKA WORKSHOP	MOMBASA
18	ELISCOH ENTERPRISES LTD	MOMBASA
19	CHARENO ENERPRISES	MOMBASA
20	GEOLY INTERGRATED SERVICE	MOMBASA
21	PAMWA ENTERPRISES & GEN SERVICES	MOMBASA
22	BASHAMMAKH ENTERPRISES	MOMBASA
23	SADAMCON ENERPRISES	MOMBASA
24	SPACE LINKS SOLUTIONS	MOMBASA
25	AL KHALIQ ENTERPRISES	MOMBASA
26	WAVECON ENTERPRISES	MOMBASA
27	AUTO EXPRESS NYALI	MOMBASA
28	MOTOR WORLD GARAGE	ALONG BENGALA RD MISHOMORONI
29	SHINNING STAR GARAGE	WAYA WA MBUZI KONGOWEA
30	OMAR AUTO GARAGE	SIMU YA UPEPO ROAD

31	TRIANGLE AUTO MOTORS LTD	KENGELENI ROAD
32	NEO MAKUPA GARAGE	MAKUPA
33	AUTO EXPRESS MSA TOWN	LIKONI RD
34	MICRON GARAGE	NEXT TO HOTEL DORSE
35	TOTAL AUTO EXPRESS SERVICE	TONONOKA ROAD, MOMBASA
36	KINGSWAY TYRES LTD	OPP. CANNON TOWERS MOI AVENUE
37	ISLAND AUTO WORKS	JOMO KENYATTA ROAD MSA
38	ROBS MAGIC	JOMO KENYATTA ROAD MSA
39	ALIED AUTO TECHNICS	LINKS ROAD NYALI MSA
40	SWALEH NGURU GARAGE	SWALE NGURU ROAD
41	ORIEL LIMITED	OPP. LINKS ROAD ROUND ABOUT
42	MONROE SUSPENSIONS	OLEANDER RD MOMBASA
43	AUTO SELECTION K. LTD	KT PLAZA HAILE SELASSIE AVENUE MSA
44	RT EAST AFRICAN LIMITED	NEAR RAILWAY STATION NEXT CORNER GAR
45	MWISHO AUTO GARAGE	MTONGWE ROAD MOMBASA
46	Eagle Auto Services	OPP. AKAMBA PARCELS KHOJA
47	BECA AUTO LTD	BEHIND NYALI CEINEMAX
48	BABU MOTOR	TANGANA ROAD
49	AUTOMARINE SERVICES LTD	ALONG MALINDI ROAD
50	WEICHAI POWER SRVICES	NAIROBI ROAD

Source: KEMRA (2019)

Appendix III: Research Budget

S/NO	Activity	Costing
1	Typing of the proposal and final project	5,000.00
2	Printing of Journals, proposal and final project	25,000.00
3	Photocopying copies of the document for the panel	4,000.00
4	Photocopying of the questionnaires	2,500.00
5	Data collection	6,000.00
6	Travel costs for data collection	5,000.00
7	Binding of the proposal and final project	3,5000.00
	Total	Ksh 51,000.00