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# The Influence of service quality on customer satisfaction: a study of container shipping lines in Kenya from a freight forwarder perspective

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# THE INFLUENCE OF SERVICE QUALITY ON CUSTOMER SATISFACTION: A STUDY OF CONTAINER SHIPPING LINES IN KENYA FROM A FREIGHT FORWARDER PERSPECTIVE

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**DECLARATION**

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.



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**ABSTRACT**

The containerized shipping industry, the backbone of the global economy, is classified as a service sector as its demand is derived from trade. Global financial trends have rendered cost minimization efforts, and global alliances ineffective in ensuring sustainability of profits for container carriers. The ability of container carriers to determine customers' needs and deliver quality services that exceed their expectations is key to a sustainable competitive advantage and profitability growth. This research focused on the influence of service quality on customer satisfaction in container shipping lines in Kenya. Data was collected randomly from 273 respondents selected from a list of licensed customs agents published by the Kenya Revenue Authority. The study employed a structured questionnaire to collect primary data which was analyzed using descriptive, correlational and inferential techniques. Wilcoxon's rank test was used to assess the gap between importance and perception of service quality, and Spearman's rank correlation was used to assess the relationship between service quality and customer satisfaction. The major finding was that the service quality dimension "responsiveness" which consists of supporting indicators that assess customers' perception and experience before and after the performance of a transportation service, should be prioritized in strategies to drive customer satisfaction. Findings also revealed that all the four service quality dimensions namely reliability, responsiveness, speed, and value are significantly correlated to customer satisfaction. The major contribution of this study is that it empirically tested the validity of service quality dimensions developed from SERVQUAL specifically for the container shipping industry.

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Looking back l marvel at how far l have come, only with God's help l powered through, for without His strength l can do nothing.

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# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the study

Shipping is a complex service business crucial for international trade and global supply chains with customers, partners and collaborators scattered all over the world (Balci, Cetin, & Tanyeri, 2018; Gao & Yoshida, 2013). The business of container shipping lines, the backbone of the shipping industry, has continued to experience financial distress in recent years due to volatility of the global economic conditions, extensive overcapacity, fierce competition and efforts to control costs by customers who are more informed and have transparency of competitive markets, and the product or services offered in the market (Balci et al., 2018; Maloni et al., 2016; Slack & Frémont, 2009; UNCTAD, 2017). In view of these market conditions, a high level of customer satisfaction is critical for survival (Midoro, Musso, & Parola, 2005).

Organizations are realizing that providing high-quality service is imperative, and to achieve a sustainable profitable growth they are compelled to invest in quality systems (Ghobadian & Jones, 1994; Tahir, Mazlina, & Bakar, 2007). Modern vessels offer little opportunity for differentiation, the hardware of the industry is increasingly becoming a commodity because many carriers have formed strategic alliances and perform transportation service by sharing the same vessels bringing significant operational and cost advantages at the expense of service delivery (Panayides & Wiedmer, 2011; Rex, Andersen, & Kristensen, 2017).

According to Yuen and Thai, (2015) in general container shipping lines can satisfy their customers by offering low-cost or providing differentiated services. Despite implementing organizational and cost management measures, global container carriers reported rising operating losses, estimated collectively at USD 3.5 billion in 2016 (Drewry, 2017). To achieve sustainable revenue growth Balci et al., (2018) emphasized the significance of container carriers improving their abilities to offer quality service as a way of differentiation and enhancing customer satisfaction.

Technological developments, which includes digitization, electronic commerce (e-commerce), the internet of things, big data, cloud computing, and additive manufacturing have redefined the entire maritime transport sector (UNCTAD, 2017). The rapid expansion of e-commerce has had transformational effects on transport and supply chains influencing change in the way business is conducted (Gao & Yoshida, 2013). Customers are now more informed, empowered and

actively involved in the entire process (Labrecque, Esche, Mathwick, Novak, & Hofacker, 2013). They have moved from traditional passive roles to performing day-to-day shipping activities such as making bookings, submitting shipping instructions, cargo tracking, printing bills of lading, amongst others in their premises (Gao & Yoshida, 2013). In response to the changing customer requirements, container shipping lines need to provide quality services that are cheaper, efficient and find opportunities to create value from the cargo moved rather than just the vessel. Improvement of the entire shipping process may lend itself to increased customer satisfaction, loyalty and attract new business (Balci et al., 2018; Evers & Johnson, 2000; Rex et al., 2017). If they fail to meet the service expectations from customers they could become marginalized.

Despite containerized shipping's dominant role in global trade, research on assessing the relationship between service quality and customer satisfaction is scant (Lobo, 2010). Furthermore, with regards to the drivers of customer satisfaction in containerized shipping little is known (Yuen & Thai, 2015). This study seeks to identify service quality dimensions most valued by customers and assess their influence on customer satisfaction with the services offered by container shipping lines. In an intensely competitive market environment retaining existing customers and attracting new ones is critical for sustainable profitability. The current study, therefore, intends to establish the influence of service quality on customer satisfaction in the container shipping industry in Kenya from a freight forwarder perspective.

### 1.1.1 Service Quality

The term "service quality" involves two abstract concepts – "service" and "quality". A service is an act of performance one party can offer to another that is essentially intangible and does not result in the ownership of anything (Kotler & Keller, 2016). Some of the underlying themes from the literature reviewed that define quality include "conformance to requirements", "freedom from variation", or "fitness for use" (Gould, 2012; Hu, Kandampully, & Juwaheer, 2009). Golder, Mitra, and Moorman, (2012) take a customer-centered approach by defining quality as the totality of features and characteristic of a product or service that bear its ability to satisfy stated or implied needs. This study adopts the definition of service quality as a measure of how well a service delivered matches customers' expectations and satisfies their needs on a consistent basis (Edvardsson, 1998; Lewis, 1989).

Any service organization aims to provide services that meet or exceed customers' expectations at every touch point within the organization. When delivering a service, all steps within the

process create value for the customer, hence to create customer satisfaction, all activities must be focused on meeting customers' expectation. For a service provider, the quality of a service is thereby ultimately measured by the total customer satisfaction at various points during the service process (Gould, 2012; Hu et al., 2009; Kotler & Keller, 2016).

Grönroos, (1984) argues that service quality has three aspects; physical quality which is the tangible aspect of service that provides customers the evidence of quality in a service, interactive quality which refers to the exchange that occurs between a customer and service provider, and image quality which represents the perception customers have of an organization. High service quality results in superior perceived value and satisfaction for the customers who utilize the service. It also contributes to favorable perceptions of image quality and increases the chances for customers to repurchase. Hence, service providers should continuously seek to improve the quality of the service they provide at every customer touchpoint with the organization to ensure that customers' expectations are met (Hu et al., 2009). The difference between customer's expectations and their perceptions of service received signifies perceived service quality (Bahia & Nantel, 2000).

Services have four distinctive characteristics: intangibility, inseparability, variability, and perishability (Cuthbert, 1996; Hamel, 1996). According to Saghier and Nathan, (2013) because of these distinctive characteristics measuring service quality is challenging. It is also difficult to understand how customers perceive services and service quality hence meeting customers' needs can be challenging (Grönroos, 1984). Involving customers in the development process of a service can lead to new and improved aspects of the service that to a higher extent would satisfy the customers' needs (Gould, 2012).

To operationalize service quality in container shipping, Yuen and Thai, (2015) developed a model from SERVQUAL that incorporates process, outcomes and logistics indicators. Their findings indicate that service quality can be parsimoniously represented by four service quality dimensions namely reliability, speed, responsiveness, and value. The current study focused on these four dimensions as reflected in the conceptual framework.

### 1.1.2 Customer Satisfaction

A person's feeling of pleasure or disappointment that result from comparing a product or service perceived performance (or outcome) to expectations is referred to as satisfaction. If the performance or experience falls short of expectations, the customer is dissatisfied; if the same matches expectations, the customer is satisfied; when expectations are exceeded the customer is highly satisfied or delighted (Fournier & Mick, 1999; Kopalle & Lehmann, 2006; Tsiros, Mittal, & Ross, 2004).

If a customer is dissatisfied, they are more likely to abandon the company and even spread negative reviews, fairly satisfied customers still find it easy to switch when a better offer comes along, highly satisfied customers are likely to repurchase and even spread positive reviews about the company. High satisfaction or delight creates an emotional bond with the brand or company, not just a rational preference (Jones & Sasser, 1995; Kotler & Keller, 2016).

Good performance is defined differently based on the individual customer needs. For example, good delivery could mean order completeness, early delivery, or on-time delivery, and two customers can report being "highly satisfied" for different reasons. One may be hard to please, and the other might be easily satisfied most of the time (Kotler & Keller, 2016). Knowing how satisfied customers are with competitors is also important to assess how much the customer's spending the company brand enjoys. The more highly the customer ranks the company's brand in terms of satisfaction and loyalty, the more the customer is likely to spend on the brand (Keiningham, Aksoy, Buoye, & Cooil, 2011). A highly satisfied customer generally buys more as the company introduces new and upgraded products, talks favorably to others about the company and its products, pays less attention to competing brands, is less sensitive to price, and stays loyal longer. They also offers product or service ideas to organizations, and it costs less to serve them compared to new customers because transactions can become routine (Homburg, Koschate, & Hoyer, 2006).

Customer satisfaction is now both a goal and marketing tool in today's competitive business environment where the internet allows customers to quickly spread both good and bad word of mouth to the rest of the world (Kotler & Keller, 2016). It has been defined as the difference in opinion between what is expected against what is perceived after a service has been rendered (Oliver, 1980). To survive in this competitive environment, firms have to raise expectations and deliver services to match for survival (Kotler & Keller, 2016). Customers form their expectations

from past buying experience, family, friends, associates advice, promises, promotions, competitor information, public information, and disclosure. If a company raises expectations too high, the buyer is likely to be disappointed. If it sets expectations too low, it won't attract enough buyers although it will satisfy those who buy (Boulding, Kalra, & Staelin, 1999).

Measuring how well a company treats customers, identifying the factors shaping satisfaction, changing operations and marketing strategies is key to customer retention (Morgan, Anderson, & Mittal, 2005). Most organizations use measures like positive word of mouth, referral to other customers, repeat purchase, brand loyalty, reduction in customer complaints, and customer retention to measure the level of customer satisfaction (Fečiková, 2004; Jones & Sasser, 1995; Kotler & Keller, 2016). Informed by literature, the current study focused on repeat purchase, positive word of mouth, referral to other customers, and brand loyalty as measures of customer satisfaction.

### 1.1.3 Container Shipping in Kenya

The shipping industry is one of the major driving forces of social and economic development in Kenya. Dominated by foreign players, it goes way back to the thirteenth century when Arab Dhows regularly called the coast of East Africa. All shipping lines and vessels operating in Kenya are foreign owned (Chege, 2001; Kiita, 2013). The main ones include CMA CGM, Evergreen Marine Corporation, Maersk Line, Mediterranean Shipping Line, Messina Shipping Line, Pacific International Lines, Safmarine and WEC Lines. These multinational firms have set up their presence either through fully owned subsidiaries or representative agents to handle port and vessel operations, and also serve as customer service centers (Mkok, 2013).

In the container shipping industry, although the ultimate customers are the cargo owners, other parties like freight forwarders may act on behalf of the cargo owners and possess discretionary power to select a service which adds complexity to satisfying customers (Frankel, 1993). For example, a freight forwarder acting on behalf of a cargo owner who can be an importing distributor or an exporter makes decisions on the selection of carriers, and the combination of intermodal transport (Othelius & Wemmert, 2013). Therefore, in addition to satisfying cargo owners, it is also important for container shipping lines to satisfy the needs of their immediate customers who are the freight forwarders.

This is even more important in Kenya as freight forwarders are the only people mandated by law to perform the services of clearing and forwarding cargoes or consignments imported from abroad or exported from respective ports in Kenya (Merchant Shipping Act, 2009). They are therefore the main recipients of the services offered by containerized carriers in the Kenyan market and play a critical role in influencing cargo owners on decisions concerning the choice of carriers.

Container throughput in Kenya is forecasted to grow at 3.6% with volumes rising to over 1.2 million Twenty-Foot Equivalent Units (TEUs) in 2018, and then steadily rising to 1.57 million TEUs in 2021. This is being driven by a solid GDP growth, government spending, domestic demand, private consumption, and infrastructure activity in the country (FitchGroup Company, 2017). Mombasa port is strategically located to serve Kenya and its neighboring countries mainly landlocked Uganda, South Sudan, Democratic Republic of Congo, Rwanda, and Burundi (Gidado, 2015). It was chosen as the most efficient entry into the Eastern Africa region according to the 2015 East Africa Logistics Performance Survey (SCEA, 2015).

The growing economy comes with higher wages and additional spending power for the general population, leading to increased trade demand and naturally more container throughput. This makes the region attractive to foreign investors, new players are coming into the market. The latest entrant is Hapag-Lloyd, from Germany, they began their operation in April 2018 (Hapag-Lloyd, 2018). The first Japanese logistics company to set up shop in Kenya, MOL Logistics Group, started operations in July 2017 (MOL Logistics, 2017). In this business environment, providing quality service to retain existing and attract new customers becomes key to success.

The industry is regulated by the Kenya Maritime Authority (KMA). Other major stakeholders include the Kenya Ports Authority (KPA), the Kenya Revenue Authority (KRA), the Kenya Shippers Council (KSC), Kenya Ships Agents Association (KSAA) and the Kenya International Freight and Warehousing Association (KIFWA).

### 1.2 Problem statement

Containerized carriers have continued to experience financial distress in recent years, and according to Drewry, (2017) global container shipping lines reported losses estimated collectively at USD 3.5 billion in 2016. The decline in profitability was projected by Hoffmann, (2010) who through analysis of trends in the market leading up to 2010 predicted stifled future growth due to weak global demand. The contraction in global trade, at a time when the container

shipping industry had invested heavily in large vessels resulted in huge capacity supply and demand imbalances pushing freight rates to record lows (UNCTAD, 2017).

This structural shift in market conditions has forced some carriers into bankruptcy and an unprecedented round of global alliances to realize synergetic gains from their combined scale (Kavussanos and Visvikis, 2016; UNCTAD, 2017). Whilst strategic alliances seem to be indispensable because of container shipping lines high fixed costs and overcapacity problem, they have resulted in a high level of homogeneity and fierce inter and intra-alliance competition which is mostly based on price (Balci et al., 2018; Fusillo, 2013; Maloni, Gligor, & Lagoudis, 2016; Slack & Frémont 2009). Focusing on cost leadership strategies may drive profitability in the short term but significantly affect the industry.

According to Yuen and Thai, (2015) in general a shipping firm can satisfy its customers by offering low-cost or differentiated services. Murnane, Saxon, and Widdows, (2016) argue that cost leadership strategies in container shipping have temporarily buoyed profitability at the expense of service delivery as carriers employ mechanisms such as reduction in customer-facing teams to manage costs. Whilst it may be obvious that service quality pays off, consistently meeting and exceeding customers' expectations continues to be a challenge for organizations globally (Mishra, 2010). Differentiated service may offer the impetus an organization needs to develop a sustainable competitive advantage. It involves identifying the most valued service quality dimensions from the customers' perspective, assessing the gaps, and implementing strategies that enable organizations to address customers' needs better than competition.

Several studies in countries like Singapore, Vietnam, and Taiwan just to mention a few have been done on different aspects of service quality in the maritime sector. Thai, (2008) in a study done on the port sub-sector in Vietnam argued that SERVQUAL as a service quality assessment tool, was inherently unsuitable for the industry and developed umbrella dimensions namely resources, outcomes, process, management, image, and social responsibility (ROPMIS) as best suited for the industry. Chen, Chang, and Lai, (2009) in a study done on the shipping industry sub-sector in Taiwan applied the SERVQUAL model to samples consisting of shippers and freight forwarders and found that it suffered from both discriminant and convergent validity. These studies focus on different sub-sectors within the maritime industry and have mixed findings on service quality models (Cheng & Choy, 2013; Cho, Kim, & Hyun, 2010; Jang et al. 2013; Jafari, Saeidi, & Karimi, 2013; Thai, 2008).

Considering the different contexts, focus differences and mixed findings reported above, this study sought to assess the influence of service quality on customer satisfaction in container shipping from a freight forwarder perspective in a Kenyan context. It employed the four service quality dimensions developed for the container shipping industry by Yuen and Thai, (2015) namely reliability, speed, responsiveness, and value. Customer satisfaction was measured using positive word of mouth, repeat purchase, referral to other customers and brand loyalty (Fečiková, 2004; Jones & Sasser, 1995; Kotler & Keller, 2016).

This study empirically tests in Kenya the model specifically developed for the container shipping industry, and sheds light on possible relationships between service quality and customer satisfaction that are insightful to the various shareholders in the industry.

### 1.3 Objectives of the study

The main objective of the study was to establish the influence of service quality on customer satisfaction in container shipping lines in Kenya. The specific objectives were:

i. To determine the service quality dimensions most valued by customers of container shipping lines in Kenya.
ii. To establish the relationship between service quality and customer satisfaction in container shipping lines in Kenya.

### 1.4 Research questions

i. What dimensions of service quality are most valued by customers of container shipping lines in Kenya?
ii. What is the relationship between service quality and customer satisfaction in container shipping lines in Kenya?

### 1.5 Scope of the study

The study focused on freight forwarders in Kenya. The locations Mombasa and Nairobi were chosen as the sole focus areas as currently all containerized import and export cargo in Kenya is handled at the port of Mombasa and the Nairobi Inland Container Depot (ICD). Kisumu ICD and Eldoret ICD are not in use hence the justification of Mombasa and Nairobi as the study sites (Cannon, 2018; Kenya Ports Authority, 2018). The sampling frame was the total number of licensed customs agents published by the Kenya Revenue Authority, (2018) under the Customs

Services Department. Freight forwarders were selected since they are mandated by law to perform the services of clearing and forwarding cargoes or consignments imported from abroad and exported abroad from respective ports in Kenya (Merchant Shipping Act, 2009). Forwarders, therefore, play a critical role in influencing cargo owners on decisions concerning container carriers in the Kenyan market.

### 1.6 Significance of the study

The study is beneficial to various stakeholders:

#### 1.6.1 Container Shipping Lines

The study findings provide shipping lines with insights on service aspects highly valued by customers. Understanding the relationship between the various quality dimensions and customer satisfaction can inform marketing strategies and provide a sustainable competitive advantage.

#### 1.6.2 Freight Forwarders

The study findings enable freight forwarders understand industry service quality standards. With this knowledge they can promote their service offering in a manner that enables them to manage the expectations of cargo owners, and may also determine carrier selection criteria.

#### 1.6.3 Policy Makers

Policy makers can use this information to develop policies geared towards enhancing container shipping services in Kenya. They include KMA, KPA, KRA, KSC, KSAA, and KIFWA.

#### 1.6.4 Academicians and Researchers

Finally, the study will be of importance to academicians and researchers who could build further from the empirical evidence of this study or critique the methodology applied.

# CHAPTER TWO: LITERATURE REVIEW

## 2.1 Introduction

This chapter highlights the guiding theory shaping the study and provides a summary of prior relevant research done in the field. The research gap, conceptual framework employed, and variables under study are also presented.

## 2.2 Theoretical Framework

The understanding of the process through which customers form satisfaction judgments has been broadly guided by three theories: expectancy disconfirmation, equity, and attribution Oliver, 1980; Oliver & Swan, 1989). Taylor and Baker, (1994) observe that the three theories are not mutually exclusive; as an example, the authors report that customers' perception of satisfaction as viewed under the expectancy-disconfirmation theory can be mediated by the attribution theory. According to Barsky, (1992) the most widely accepted theoretical framework of the customer satisfaction concept is the expectancy-disconfirmation theory. This theory is the most relevant to this study as it informs the way customer satisfaction was assessed, that is, the gap or lack thereof between customer expectation and perception of the quality of services rendered by container shipping lines.

### 2.2.1 Expectancy-disconfirmation theory

Oliver, (1980) introduced the expectancy-disconfirmation theory for studies of customer satisfaction in the service industry. The theory suggests that pre-consumption product or service standards are the essential determinants of satisfaction. Prior to purchasing a product or service, customers form expectations, and the consumption or experience with the product or service produces a level of perceived quality that is influenced by those expectations (Oliver, 1980; Oliver & Swan, 1989; Vavra, 1997). Post-purchase satisfaction is viewed as a factor of expectation, perceived performance, and disconfirmation of beliefs (Mohr, 1982).

Customer satisfaction, therefore, involves assessing anticipated performance (expectation), against actual perceived performance, with the gap between the two constructs constituting disconfirmation. Negatively disconfirmed (underachieved) standards lead to dissatisfaction, confirmed standards leads to moderate satisfaction, and positively disconfirmed (exceeded) standards leads to high satisfaction (Fournier & Mick, 1999). According to Ivanka, Suzana, and Sanja, (2008) satisfaction can be determined by subjective (e.g. customer needs, emotions) and

objective (e.g. product and service features) factors hence the overall level of customer satisfaction involves the making of an aggregated judgement on a blend of subjective and objective aspects of the service-rendering process.

The structuring of the SERVQUAL tool is in keeping with the expectancy-disconfirmation theory. This is because the tool assigns a value to what customers expect on a specific quality dimension, does the same for perception after the service is consumed, and the arithmetic difference between the two – expectation and perception – is interpreted as service quality (Oh, 1999). The approach is in keeping with the Expectancy disconfirmation theory in that customer satisfaction, as described, involves disconfirmation (Fournier & Mick, 1999).

From a service quality perspective, service provider gaps can be favorable or unfavorable. Service quality as perceived by a consumer depends on the size and direction of the customer gap, which in turn, depends on the nature of the gaps associated with the design, marketing, and delivery of services (Parasuraman, Zeithaml, & Berry, 1985). The magnitude and direction of each gap will have an impact on service quality which is critical for identifying the differences between the service provider's perception of service quality dimensions, and the consumers' perceptions of those dimensions (Parasuraman et al., 1985). The dimensions adopted by this study are SERVQUAL-based summative dimensions specifically developed for the container shipping industry in a study done in Singapore (Yuen & Thai, 2015).

The equity theory, applied to containerized shipping, is most applicable to the assessment of the customer's relationship with the service provider as it focusses more on the interaction than the actual product or service. As the role of containerized shipping has evolved in global supply chains, shipping lines are required to pay more attention to managing relationships with their partners, most important among these being customers (Jang et al., 2013). Carbone and Gouvernal, (2007) show that selecting key logistics service providers and establishing long-term relationships with customers are vital factors in ensuring supply chain integration which is key in the provision of quality products and services thus driving customer satisfaction.

## 2.3 Empirical Review

Service quality and customer satisfaction are intimately connected and are also areas of strategic interest for customer-centered organizations (Kotler & Keller, 2016). This section covers existing literature on service quality dimensions and their relationship with customer satisfaction.

### 2.3.1 Service Quality Dimensions

This study adopts the definition of service quality as a measure of how well a service delivered matches customers' expectations, and satisfies their needs on a consistent basis (Edvardsson, 1998; Kothari, 1988; Lewis, 1989) this definition is in keeping with the expectancy-disconfirmation theory – the main theory applied in this study (Oliver, 1980). Kothari, (1988) emphasizes the quality of simultaneous delivery and consumption as essential to the definition of service quality; as such, customer satisfaction, as informed by the expectation-disconfirmation theory, is viewed as an ongoing process shaped by the simultaneous delivery and consumption of services offered by container shipping lines.

Different models were proposed in the literature to operationalize service quality. In the maritime industry, Thai, (2008) in a study conducted in Vietnam and tested only with service providers, guided by the premise that SERVQUAL was inherently unsuitable for the industry did a thematic analysis and umbrella dimensions; Resources, Outcomes, Process, Management, Image, and Social Responsibility (ROPMIS) were identified as the best suited for the industry. The researchers recommended using the same instruments on customers to compare gaps and strengthen the validity and reliability of the dimensions and factors in the model. Yeo, Thai, and Roh, (2015) adopted the ROPMIS model in an analysis of port service quality and customer satisfaction in Korean ports. Their study recommended future research to examine the influence of service quality on other important aspects such as customer loyalty, word of mouth and repurchase intention. These factors were adopted by the current study as measures of customer satisfaction.

Jafari et al., (2013) in a study done in the Imam Khomeini port of Iran developed the Importance-Performance Analysis (IPA) model; Cho et al., (2010) introduced three dimensions of port service quality: exogenous, endogenous and relational and identified their effects on customer satisfaction, loyalty and referral intentions with data collected from two ports in China; Bichou, Lai, Lun, and Cheng, (2007) formulated a generic quality management framework that can be employed by shipping lines and ports to conform to maritime security regulations; Stank,

Goldsby, Vickery, and Savitskie, (2003) examined the relationships among three dimensions of logistics service performance (operational, relational, and cost performance). Each of these models tailored to the maritime industry accounts for sector differences (e.g. ports, logistics services, shipping lines) with most respondents being service providers. The current study focuses on the container shipping sector and works with freight forwarder as respondents.

Multiple SERVQUAL-based tools have been employed in the study of quality dimensions within different industries. Parasuraman et al., (1985) claimed the model is generic and applicable invariantly across all contexts. Ladhari, (2009) argues that the interpretation of service quality differs across industries, customer groups, and cultures. Despite its shortcomings, it remains valid for service quality assessment (Ladhari, 2009).

Few studies on service quality have been done in the context of container shipping within the maritime industry. A study done using shippers and freight forwarders as respondents found that SERVQUAL suffers from both discriminant and convergent validity (Chen et al., 2009). Lirn, Lin, and Shang, (2013) identified outcome-oriented indicators, firms' carbon footprint and involvement in corporate social responsibility as possible areas of future studies. Kannan, Bose, and Kannan, (2012) used the SERVQUAL model to establish a list of service quality criteria for container shipping. They recommended future studies to develop a service quality model for the exclusive use of container shipping lines which seems to have been addressed by Yuen and Thai, (2015) who developed a model from SERVQUAL that is represented by four dimensions. Each dimension has a number of indicators that have been studied in different contexts (Balci et al., 2018; Kannan et al., 2012; Notteboom, 2006; Wen & Lin, 2016). The current study focused on these four service quality dimensions namely reliability, speed, responsiveness, and value. They are discussed in detail below.

#### 2.3.1.1 Reliability

Parasuraman et al., (1985) described reliability as the ability to perform the promised service dependably and accurately. In a study set to identify the dimensions of service quality specific to container shipping, Yuen and Thai, (2015) used exploratory factor analysis and regression analysis to interpret indicators of reliability. The findings for this dimension consist of three indicators of core and non-core attributes which reflect the overall consistency in providing customer service, error-free documentation and the transportation itself. These indicators have been highlighted in various studies in the container shipping industry, with varying findings on their level of importance (Balci et al., 2018; Kannan et al., 2012; Wen & Lin, 2016).

In a study done by Lam, Ng, Seabrooke, and Hui, (2004) in Hong Kong - the world's busiest container port in the world, the highlighted approach in response to the need for reliability of shipping services is the use of a combination of neural network models and simulation in predicting shipping traffic to enhance predictability in delivery. The researchers argue that this approach results in neural network models that are generally more conservative, more reliable and closer to reality.

With regards to the transportation itself, Martin, (2014) provides a systematic evaluation of packaging of shipped items from the inconsistencies of break-bulk cargo, the early processes of unitization in the form of pallets and packing crates representing attempts to formalize and regularize inconsistencies, and further development of fully sealed containers. The benefits of such strategies include the protection of cargo from damage or theft; the cubic efficiency of the container; increased speed of loading and discharge; reduction in labour costs; and the ability to interchange between different forms of transport which enhance the dependability of the shipping process (Haralambides, 2015; Lim, 1998; Martin, 2014).

In assessing the benefits of containerization, the results of which have been increased reliability in shipping, as may be perceived by consignees, Levinson, (2006) observes that although containerized shipping forms the backbone of world economies, resulting in such benefits as low transport costs, enhanced reliability, reduced pilferage and theft, and low insurance costs, a comparatively small body of literature on the transportation mechanism exists.

#### 2.3.1.2 Speed

According to Yuen and Thai, (2015) speed is the second most important dimension to be considered in assessing service quality in container shipping. The dimension covers faster transportation services and reduction of in-transit inventories in the transportation chain. The authors classify the dimension under core service attributes and identify four indicators – transit time of transportation services, the frequency of transportation services, the accuracy of cargo tracking systems and availability of empty containers.

Transit time refers to time spent for goods in transport. It's one of the indicators that has been consistent in literature going back to the mid-1980s with different studies showing its importance in container shipping. Container shipping lines determine their services by configuring the

number of port calls, the number of ships to be deployed and their speed (Brooks & Trifts, 2008; Wong, Yan, & Bamford, 2008). The frequency of transportation services refers to the number of vessel departures and ports of call frequency (Chung, 2011; Wen & Lin, 2016; Yang, Tai, & Chiu, 2014). The other indicator is the accuracy of cargo tracking systems; according to Liang et al., (2007) e-tracking systems increases a shipping line's effectiveness as customers can use online bookings and tracking to monitor the status of their shipments. Wen and Lin, (2016) argue that providing different sizes and functions of containers that conform to standards and are internally clean ensures transport safety which is a key indicator of service quality.

Efforts towards meeting the expectation of speed of delivery are countered by cost leadership strategies. Fuel is the biggest cost element for running vessels. Since fuel consumption rises exponentially with a vessel's velocity, lowering the vessel speed can sustain substantial fuel cost reductions and improve environmental performance in terms of lower emissions (Meyer, Stahlbock, & Voß, 2012). Whilst Yuen and Thai, (2015) findings indicated that speed is the second most important dimension to be considered in assessing service quality in container shipping, Ulaga and Eggert, (2006) argue that although shipping lines need to perform well in these core service attributes, the core aspects of the service do not increase customers perception of service quality.

#### 2.3.1.3 Responsiveness

Parasuraman et al., (1985) described responsiveness as the willingness to help customers and provide prompt service. Yuen and Thai, (2015) established that in containerized shipping it constitutes six attributes namely; speed of claims, the effectiveness of sales team, promptness of customer service, and variety of service offerings.

Whilst the findings of the study done by Yuen and Thai, (2015) in Singapore established that this dimension comes in third with regards to its effect on customer satisfaction, another study that was done by Balci et al., (2018) in Turkey found that it was the most important variable. They grouped the indicators under customer relations and argued that this group was the most differentiable attribute for containerized shipping and could be effectively used to compete and avoid commoditization as well as drive the customers' perception of quality of service rendered.

This strengthens Maloni et al., (2016) argument that container shipping lines cannot differentiate the quality of the service they offer using core service attributes. Supporting (non-core) elements

such as the prompt settlement of damage (refund claims) is key in shaping customers perception of the performance of the transportation service (Lu, 2003; Yuen & Thai, 2015).

#### 2.3.1.4 Value

The dimension value speaks to the total benefit of moving the cargo and has four indicators namely, pricing of shipping services, total logistics cost, conditions of ships and equipment, safety and security, exhibition of socially responsible behavior, and involvement in green shipping practices (Yuen & Thai, 2015). About one-third of the total value of global trade is carried by container shipping lines which highlight its importance to international trade and the fact that it has become an important link in global supply chains (Gao & Yoshida, 2013; Windeck, 2013). According to Acciaro, (2011) globalization could not have taken place without the development of containerization and the liner shipping industry. Introduced to the shipping business in the 1970s, containerization became the major driver of global trade as it lowered the cost of transportation. The move from crates to containers was in response to the need to protect the cargo from damage and theft, cubic efficiency, timeliness and reduction in cost (Haralambides, 2015; Martin, 2014). Lim, (1998) argues that containers standardized the quality of services offered by all shipping lines by providing safer, more reliable, faster and low-cost transportation. Yuen and Thai, (2015) point out that as the cargoes transported by container shipping lines are generally finished products such as electronic appliances, devices, and apparels, customers are less price-sensitive and their overall logistic cost can be minimized by improving time-related service attributes such as reliability and speed (Yuen & Thai, 2015).

For a long time, the shipping industry was dominated and controlled by large trading nations who made collaborative agreements regarding prices, geographical coverage, and collaboration on operational activities through conferences (Othelius & Wemmert, 2013). The repeal of the Council Regulation 4056/86 and the enactment of the Ocean Shipping Reform Act (ORSA) of 1998, significantly shifted the structure of conferences to non-binding agreements, long-term confidential contracting, and global alliances. As a result, freight rates became transparent to all carriers (Fusillo, 2013). Today shipping prices are commonly settled through negotiations between individual carriers and customer. The terms are based on the commodities being shipped and are tailored-made to the customers' requirements (Acciaro, 2011). These changes have made the shipping industry significantly more competitive. The combination of fierce competition, high capital intensity, fuel price fluctuations, and strong dependencies on the global economy has led to three main trends within the container shipping business; investment in larger vessels, the

formation of strategic alliances and the emergence of strategies such as 'slow steaming' to save on fuel costs (Othelius & Wemmert, 2013).

Li, Wang, and Zhou, (2018) report that restructuring of the materials used in making containers would result in cost reduction to the shipping companies and increased reliability in transportation. In addressing the need for safety and security, Bichou et al., (2007) formulated a generic quality management framework that can be employed by shipping lines and ports to conform to maritime security regulations. The authors argue that existing frameworks largely focused on prescriptive guidelines with little or no inclusion of the quality assurance dimension. They illustrate the application of this framework on the planning, implementation, and management of the 24-Hour Advance Vessel Manifest Rule intended to ensure security and safety of cargo in the United States.

Shin and Thai, (2015) focused on the relationship between corporate social responsibility (CSR) and the customer-centric constructs – relationship maintenance, customer satisfaction, and customer loyalty. The author's summation following a review of literature in the field indicate that relationship management has a positive influence on customer satisfaction, and customer perception of CSR has a positive influence on customer satisfaction and loyalty.

### 2.3.2 Service Quality and Customer Satisfaction

Successful firms in today's competitive business environment recognize the importance of service fulfillment in promoting growth of their customer base and building loyalty (Homburg et al., 2006). Conditions of high commoditization in the shipping industry have resulted in uniformity in core-service offerings, hence the need to focus on non-core service offerings such as service quality to drive customer satisfaction (Balci et al., 2018; Glave et al., 2014; Homburg et al., 2006; Hu et al., 2009; Jang et al., 2013). Service quality, customer satisfaction, and company profitability are intimately connected. Higher levels of quality result in higher levels of customer satisfaction, which support higher prices and lower costs (Kotler & Keller, 2016).

Several researchers have conceptualized the terms quality and satisfaction as different constructs although they are sometimes used interchangeably. Satisfaction is described as short-term evaluation of for instance a service encounter whilst quality is described as a more general long-term evaluation (Parasuraman et al., 1985). A number of empirical studies have shown a high correlation between relative product quality and the quality of the service rendered on; customer

satisfaction, customer retention, attraction of new customers, increase in productivity, market share growth, reduction in operating costs, improved profitability amongst others (Hinson & Mensah, 2006; Reichheld & Teal, 1996; Parasuraman et al., (1985).

Findings from a study done by Yuen and Thai, (2015) model provide a succinct representation of the most pivotal dimensions when assessing quality in the containerized shipping market. These are responsiveness, reliability, speed and value. These dimensions were adopted for this study. They can be perceived differently depending on customers' expectations. Each of the dimension and its influence on customer satisfaction is discussed below.

#### 2.3.2.1 Reliability and Customer Satisfaction

Yuen and Thai, (2015) highlight reliability as the most important dimension of service quality in the container shipping industry. This refers to the ability of container shipping lines to consistently perform the promised service and inspire trust and confidence to their customers. They identified three indicators namely, overall consistency in providing customer service, error-free documentation, and on-time pick-up and delivery of cargo that were interpreted as reliability.

According to Wong, Yan, and Bamford, (2008) schedule reliability and communication skills are more important than freight costs because delays in transportation and inefficient employees are the most frequently encountered problems. This view is supported by Yuen and Thai, (2015) who argue that reliable transportation service results in substantial cost savings for cargo owners. It reduces supply uncertainty and safety stocks. With less variability in supply replenishment cargo owners are able to streamline their production, which results in better utilization of assets and resources driving their satisfaction with the services offered by container shipping lines.

In contrast to above studies, findings from a more recent study done by Balci et al., (2018) indicated that core service attributes such as reliability and frequency of vessel sailings, and transit time were least effective in differentiating container shipping lines services compared to non-core service attributes. They argue that the core service has limited opportunities to offer additional benefit to customers as they are based on standardization. Strategic alliances have reduced the opportunities for distinguishing the core service attributes even further because of vessel sharing agreements which implies that customers perceive the quality of the service to be the same especially for those in the same alliances. This view is supported by several studies that argue strategic alliances have resulted in a commodity-like industry because of the

standardization of core service attributes (Balci et al., 2018; Glave et al., 2014; Hoffmann, 2010; Kavussanos & Visvikis, 2016). Reimann, Schilke, and Thomas, (2010) contend that customer intimacy can play an important role in commoditized markets by informing the firm on how to enhance its products, service, or better serve its customers.

#### 2.3.2.2 Speed and Customer Satisfaction

This dimension was ranked as the second most important in containerized shipping. It consists of the transit time of transportation services; frequency of transportation services; the accuracy of cargo tracking systems and availability of empty containers (Yuen & Thai, 2015). In contrast to the findings in this study Ho, Chiu, Chung, & Lee, (2017) found that the time taken to deliver cargo was the most important attribute of service quality followed by freight costs and transport reliability. Both studies are supported by findings from other studies that argue that service attributes associated with core activity of shipping service are the main contributors to customer satisfaction (Meixell & Norbis, 2008; Notteboom, 2006; Yuen & Thai, 2015). Other studies that argue that standardization and the current industry commoditization has resulted in shipping lines offering homogeneous services limiting the opportunities of core service attributes influencing customer satisfaction (Glavee-Geo & Engelseth, 2016; Hoffmann, 2010; Maloni et al., 2016).

Whilst the study that was done by Balci et al., (2018) indicates that transit time and frequency of transportation services were among the lowest attributes that container shipping lines could use to differentiate the quality of their services, they also point out that many of the strategic agreements for utilizing same vessels are applicable to a certain port (usually a hub port) hence transit time to final destination may differ after the hub port. Therefore, any attribute can provide opportunities for carriers to differentiate the services they offer, although, some of them only change slightly when utilizing the same vessels.

According to Lim, (1998) the introduction of containers in the industry standardized the quality of services offered by all shipping lines by providing safer, more reliable, faster and low-cost transportation. Other studies argue that providing different sizes and functions of containers that conform to standards and are internally clean ensures transport safety which is a key indicator of service quality (Wen & Lin, 2016; Wong, Yan, & Bamford, 2008). Balci et al., (2018) strengthens this position by arguing that if shipping lines offer superior services on availability and cleanliness of equipment and create a strong positioning in the market compared to its

competitors, they may even obtain premium prices especially for sensitive cargo owners such as refrigerated cargoes.

Ulaga and Eggert, (2006) present a different view by arguing that although shipping lines need to perform well in core service attributes, the core aspects of the service do not increase the customers' perception of service quality. The mixed findings on the importance of the different indicators grouped under the dimension speed are therefore anticipated to show little variability.

#### 2.3.2.3 Responsiveness and Customer Satisfaction

As surmised by Yuen and Thai, (2015) the dimension responsiveness in containerized shipping constitutes six indicators that focus on the relationship aspect of the service rendering process. They are; speed of claims, the effectiveness of sales team, promptness of customer service, and variety of service offerings. Balci et al., (2018) highlight that shipping companies, in the bid to remain competitive, may need to take up more roles in the end-to-end process of shipping to make their variety of service offering robust by customizing the services to meet individual customer needs in order to drive customer satisfaction.

The need for relationship building as an enhancer of customer satisfaction is emphasized by (Jang et al., 2013). The prominence of responsiveness as a determinant of customer satisfaction is however challenged by Sayareh, Iranshahi, and Golfakhrabadi, (2016) findings which rank it second last among the most important identified determinants of service quality in a list of five dimensions assessing customer satisfaction among container terminal operators.

In viewing customer satisfaction as a form of external pressure, Homburg et al., (2007) propose a culture-change approach to respond to customer needs. Determining customer needs and wants is a crucial element of creating the service offerings that will drive customer satisfaction (Balci et al., 2018). In a study conducted by Stank et al., (2003) on the perception of quality of service in two different outlets of the same retail chain, it emerged that albeit similarity of service providers, customer perceptions on the dimension were varied with the variation possibly attributed to the difference in culture.

#### 2.3.2.4 Value and Customer Satisfaction

This dimension was ranked last in terms of importance. It speaks to the total benefit of moving the cargo and has four indicators namely; pricing of shipping services, total logistics cost,

conditions of ships and equipment, safety and security, exhibition of socially responsible behavior, and involvement in green shipping practices (Yuen & Thai, 2015). Yuen and Thai, (2015) further argue that as the cargoes transported by container shipping lines are generally finished products such as electronic appliances, devices, and apparels, customers are less price-sensitive and their overall logistic cost can be minimized by improving time-related service attributes such as reliability and speed. In the study done by Othelius and Wemmert, (2013) the findings indicated that freight forwarding customers' needs are homogeneous within the customer segment, price was not necessarily the deciding factor when choosing between different shipping companies, and they commonly used many ocean transport suppliers (Othelius & Wemmert, 2013). In another study done by Lobo, (2010) price was mentioned as one of the top priority criteria it was attributed to the consequence of the low margins within the freight forwarding industry.

As shipping companies are no longer protected by the fixed conference prices, more emphasis has been placed on capturing size and network economies by increasing the scale of operations (Gao & Yoshida, 2013). Many shipping companies have invested heavily in new larger vessels that enables them to decrease operational costs by reducing fuel consumption, man-hours and capital cost per transported container (Othelius & Wemmert, 2013). This has resulted in extensive overcapacity within the industry that has led to strategic alliances to gain operational cost savings (Balci et al., 2018; UNCTAD, 2017). They also provide advantages such as market and network integration, risk sharing and reduction of competitive pressure (Othelius & Wemmert, 2013).

The downside is that they have led to the commoditization of the industry driving freight rates to record lows (Balci et al., 2018; Glave et al., 2014; UNCTAD, 2017). The market is characterised by extensive price fluctuations by carriers who radically lower rates to attract customers and increase their fill-rates on the vessels. This makes customers less loyal and more inclined to change between suppliers to gain cost savings. As a result, the possibility of container shipping lines to cover the costs for the shipping services has decreased drastically (Othelius & Wemmert, 2013). It is, therefore, inferable that the effect of this dimension on customer satisfaction will be curtailed.

Decreasing vessel speed is another strategy used by shipping companies to cut operational cost, it's commonly referred to as slow steaming. Since fuel consumption rises exponentially with a vessel's velocity, lowering the vessel speed can sustain substantial fuel cost reductions and

improve environmental performance in terms of lower emissions. Slow steaming is also used by shipping companies as a mean of adjusting network capacity in the short term (Meyer et al., 2012). Reimann, Schilke, and Thomas, (2010) observe that cost leadership is of higher significance in highly commoditized industries. It enables companies to price competitively which can influence customer satisfaction ratings for lines that offer the lowest prices. Balci et al., (2018) reports that a high level of homogeneity makes container shipping a commodity-like industry where competition is mostly based on price. Murnane et al., (2016) however, observe that companies employing cost leadership have often done so at the expense of quality in service offering hence pointing to an inverse relationship between improvement of value from the customers' point of view and customer satisfaction.

### 2.4 Gaps in Research

The business of container carriers, the backbone of the maritime industry, has gotten tougher in recent years with most shipping lines reporting poor profitability or losses due to the volatility of the global economic conditions, extensive overcapacity, fierce intra-alliance competition and efforts to control costs by informed customers (Balci et al., 2018; Maloni, Gligor, & Lagoudis, 2016; Slack & Frémont, 2009; UNCTAD, 2017). Murnane et al., (2016) observes that to regain profitability container shipping lines have employed cost leadership strategies such as, reduction in customer facing teams, which in some cases have temporarily buoyed profitability at the expense of service quality.

Ho, Chiu, Chung, and Lee, (2017) observed that if container shipping lines can better understand the dynamic changes of customer needs, improve on their communications, identify ways to reduce customer cost, and provide more convenient services they can sustainably improve profitability in the uncertain shipping market. Wen and Lin, (2016) argues that understanding customers' needs in container shipping can enhance customer satisfaction and drive loyalty. A view supported by Kotler and Keller, (2016) who contend that service quality, customer satisfaction, and company profitability are intimately connected. In appreciation of customers diverse needs and wants Balci et al., (2018) argues that with the high level of homogeneity of service offering due to strategic alliances, container carriers should identify other attributes that customer value such as service delivery to drive customer satisfaction and profitability. This study sought to address this gap.

Different models have been developed by different studies to measure service quality in different industries across the world. Specific to the maritime industry there seems to be mixed findings, different dimensions identified depending on the various subsectors – ports, tramp shipping, logistics service etc. and where the study is conducted. Some of the models developed include generation of generic quality management frameworks, security regulation models, port service quality model, service quality model for the tramp shipping sector, logistics service performance, quality management practices and organizational performance (Cheng & Choy, 2013; Cho et al., 2010; Jang et al., 2013; Jafari et al., 2013; Madar & Neacsu, 2016; Thai, 2016; Thai, 2015; Thai et al., 2014; Thai, 2008). The findings from these studies also provide different results for the most important service quality dimensions and their impact on different business challenges such as organizational performance, security challenges, service delivery etc. The multiplicity of studies conducted in the various sub-sectors of the maritime industry indicate the uniqueness of each sub-sector and importance of understanding quality concerns in the different local markets which this study seeks to address for the container shipping industry in the Kenyan context.

Restricting the literature search to service quality and 'container shipping lines', 'container carriers' or 'liner shipping' a few studies were found. Kannan et al., (2012) in a study done in India sought to establish a list of service quality criteria for container shipping lines and recommended future studies to develop a service quality model for the exclusive use of container carriers. Yuen and Thai, (2015) developed a model from SERVQUAL specific to container shipping lines with four service quality dimensions namely reliability, speed, responsiveness, and value. The researchers recommended similar studies to be conducted in other markets to improve on the validity and reliability of the service quality dimensions. Culture was also mentioned as a possible limitation of the study because of its influence in the interpretation of the service quality dimensions. This study strives to fill this gap by focusing on the influence of the service quality dimensions proposed by Yuen and Thai, (2015) on customer satisfaction in the containerized shipping industry in Kenya from a freight forwarder perspective.

In the Kenyan market, studies done in the containerized shipping industry primarily focused on different business problems from a service providers' perspective (Chege, 2001; Disi, (2008) Katana, 2017; Kiita, 2013; Mutisya, 2016; Ngoko, 2015; Njonjo, 2015; Zachary & Kipchirchir, 2015). By focusing on freight forwarders who are the primary recipients of the services offered by container shipping lines, this study seeks to plug the gap by shifting away from service providers to customers.

The study adopted the model developed by Yuen and Thai, (2015) as the model is based off of SERVQUAL's - dominant in the industry – and is specifically adapted for use in the shipping industry. Informed by literature, the influence of the identified service quality dimensions on customer satisfaction were explored using repeat purchase, positive word of mouth, referral to other customers and brand loyalty as measures of customer satisfaction (Fečiková, 2004; Jones & Sasser, 1995; Kotler & Keller, 2016). The study therefore establishes the relationship between service quality and customer satisfaction in the shipping industry in Kenya for the benefit of stakeholders in the industry most noteworthy being the shipping lines that can leverage the relationship for competitive advantage.

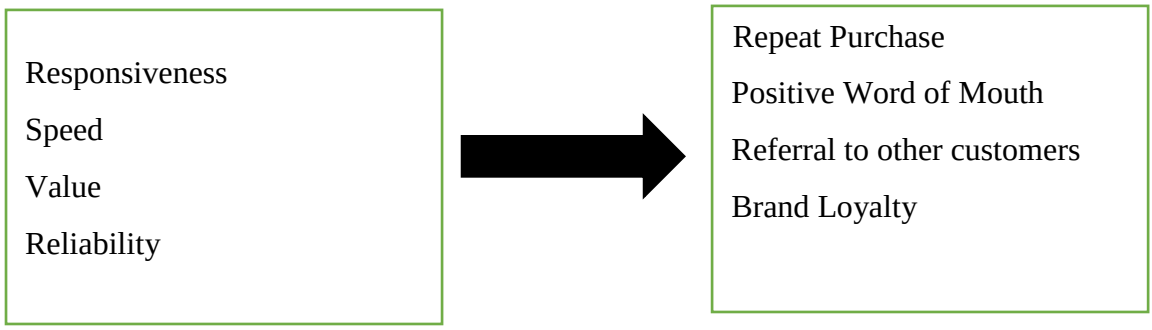
## 2.5 Conceptual Framework

The conceptual framework below was designed based on the literature reviewed. A diagrammatic depiction of the conceptual framework is shown in figure 2.1. The diagram illustrates the relationship between service quality and customer satisfaction. Service quality was the independent variable and was looked at using four dimensions namely reliability, speed, responsiveness, and value (Yuen & Thai, 2015). Customer Satisfaction was the dependent variable and was looked at using four measures namely repeat purchase, positive word of mouth, referral to other customers and brand loyalty (Fečiková, 2004; Jones & Sasser, 1995; Kotler & Keller, 2016).



Figure 2.1: Service Quality and Customer Satisfaction

Service Quality Dimensions Customer Satisfaction




Independent variables Dependent variables

*Source: Researcher*

**2.6 Operationalization of variables**

This research seeks to establish the relationship between service quality and customer satisfaction in the shipping industry. Service quality is the independent variable while customer satisfaction is the dependent variable.

**Table 2.1 Operationalization of variables**

| Variables | Constructs | Operational Definition | How it is measured | Source |
|---|---|---|---|---|
| Independent | Reliability | Ability to perform the promised service, and inspire trust and confidence. | 5-point Likert scale | Kannan et al., (2012) Yuen and Thai, (2015) |
| | Speed | Timely delivery of cargo | 5-point Likert scale | Chung, (2011) Yuen and Thai, (2015) |
| | . Responsiveness | Willingness of employees to help customers and provide prompt, customized service. | 5-point Likert scale | Parasuraman et al., (1985) Yuen and Thai, (2015) |
| | Value | The total benefit of moving the cargo (incl. transportation, shipment visibility, freight costs etc.) | 5-point Likert scale | Gao and Yoshida, (2013) Yuen and Thai, (2015) |
| Dependent | Repeat purchase | A customer coming back for more products and services. | 5-point Likert scale | Fečiková, (2004) Jones and Sasser, (1995) |
| | Positive word of mouth | A customer tells others good attributes about a product or service. | 5-point Likert scale | Jones and Sasser, (1995) |
| | Referral to other customers | A customer recommends the product or service to others who have not experienced it before. | 5-point Likert scale | Fečiková, (2004) |
| | Brand Loyalty | Customers continue to buy from the same brand of goods and services rather than competing brands. | 5-point Likert scale | Kotler and Keller, (2016) |

# CHAPTER THREE: RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter presents the research design applied, the sampling method used, the data collection tools utilized and the analysis method adopted.

## 3.2 Research Design

This was a cross-sectional study that used descriptive and correlational research design. Descriptive research design is used when the purpose of the study is to produce an accurate representation of persons, events or situations (Saunders, Lewis, & Thornhill, 2016). This is suitable for this study as it focuses on respondents perception of the importance of service quality dimensions, and their influence on customer satisfaction with the services offered by container shipping lines. Correlational design was employed to assess the degree of relationship between the various independent and dependent variables proposed in the conceptual framework.

## 3.3 Population of the study

Currently, all containerized import and export cargo in Kenya is handled at the port of Mombasa and the Nairobi Inland Container Depot (ICD). Kisumu ICD and Eldoret ICD are not in use hence the justification of Mombasa and Nairobi as the study sites (Cannon, 2018; Kenya Ports Authority, 2018). The population of the study was all licensed freight forwarding companies and the sampling frame was the 868 licensed customs agents in Kenya (Kenya Revenue Authority, 2018).

## 3.4 Sampling Design

The study adopted a convenience purposive sampling technique to select respondents. Saunders et al., (2016) points out that samples ostensibly chosen for convenience often meet purposive sample selection criteria that are relevant to the research aim. The sample size of 267 was increased to 300 respondents to reduce the risk of non-response bias or any unusable data (Groves & Peytcheva, 2008). The method used to calculate the sample size was drawn from Bartlett, Kotrlik, and Higgins, (2001) and is outlined below.

$$\frac{\frac{z^2 \times p(1-p)}{e^2}}{1+(\frac{z^2 \times p(1-p)}{e^2 N})}$$

Whereby:

Population Size = N | Margin of error = e | z-score = z | p is percentage in decimal form.

***z*** = 1.96

***p*** =0.5

***e*** = 0.05

Therefore:

$(1.96^2 * (0.5* (1-0.5))/0.05^2 = 384.16$

$1 + ((1.962 * (0.81* (1-0.81))/ (0.05^2*868)) = 1.4426$

The sample size (n) = 384.16/1.4426 = 266.3

Therefore, the sample size is 267.

**3.5 Data Collection Method**

Structured questionnaires with five sections served as the data collection tool. The first section featured demographic characteristics, the second section sought to determine the most valued service quality dimensions, and the third section sought to understand how different service quality dimensions influence the level of customer satisfaction with the service provided by container shipping lines. The structured questionnaire was operationalized using a five-point Likert scale. The expectation and perception scores were collected simultaneously for each item. The structured questionnaire was preceded by an introductory letter to gain cognitive access to the organization and ensure respondents understood the purpose, scope and expected benefits of the research. The letter of introduction, Strathmore University Letter and questionnaire are attached as Appendix A, Appendix B, and Appendix C respectively.

The researcher made use of six research assistants; three in Nairobi and three in Mombasa who were trained on how to collect data using a questionnaire and a basic understanding of the topic being studied.

### 3.6 Data analysis approach

The data collected was checked for completeness and recorded using numeric codes. Given the non-parametric ordinal nature of the data, the most valued service quality dimension was assessed using the measures of central tendencies, summative and inferential analysis techniques were also employed. To assess the level of customer satisfaction, a Wilcoxon Rank Test was used to measure the disparity or lack thereof of the responses on the section of expectation and the section of perception (Cliff, 2014). Spearman's Rank correlation was used to ascertain the strength of association between service quality and customer satisfaction. The Spearman's correlation coefficient rho is often used as the index of correlation when the data collected is ordinal in nature (Myers & Sirois, 2006). Techniques such as tables, graphs, and charts were used to present the results.

### 3.7 Research Quality

Research quality was ensured through assessing reliability and validity of the study. Reliability refers to the extent to which the data collection techniques and analysis used in a study would yield consistent findings if the study is replicated (Saunders et al., 2016). Reliability was achieved through standardization of the items/ratings, use of appropriate population sample, and use of precise measurement scales to avoid rounding off figures. Cronbach's alpha was also used to determine the consistency and gauge the reliability of the data collection tool.

Validity is concerned with the accuracy of the measurement, it measures the extent to which the research measures what it was intended to measure. Internal validity was sought through clear direct questions and content validity established through a detailed operationalization of variables by ensuring the questionnaire provided adequate coverage of the research questions (Saunders et al., 2016). A pilot test was also conducted to check for any weakness and errors in the design of the data collection tool.

#### 3.7.1 Reliability and Validity Tests

Reliability coefficient was tested by use of the Cronbach's alpha (α) analysis to measure the consistency of responses across a set of questions testing the scale and subscale used. The coefficient is a value between 0 (very low) and 1 (very high) with higher values indicating higher reliability among indicators (Saunders et al., 2016). In accordance with the Cronbach alpha test, the total scale of reliability was above 0.8 for each dimension which means that the reliability

test on the tool for data collection is substantial in every perspective. A summary of the results is presented in table 2.2 below.

**Table 3.1 Reliability Test**

| **Scale** | **Cronbach's Alpha Score** |
|---|---|
| Importance | 0.823 |
| Reliability | 0.887 |
| Speed | 0.890 |
| Responsiveness | 0.922 |
| Value | 0.890 |
| Customer Satisfaction | 0.919 |

*Source: survey data*

Validity refers to the extent to which the data collection method accurately measures what it was intended to measure (Saunders et al., 2016). A pilot study using 25 respondents that were in direct contact with the researcher was done to ensure the interpretive validity of data collection tool. Although the initially proposed questions constituting the questionnaire were well understood, it was suggested that a question on the shipping process be included under measures of customer satisfaction to provide a holistic representing of the container shipping industry. The proposed measure is supported by the findings in the study done by Evers and Johnson, (2000) that argues that improvement of the entire shipping process may lend itself to increased customer satisfaction, loyalty and attract new business.

### 3.8 Ethical considerations

Ethical principles governing research as stipulated by Strathmore Business School were followed. Informed consent of the target participants was ensured by providing them with all the information required for the purposes and benefits of the research including their right to decline participation and their right to privacy and protection. The respondent's names were not disclosed in respect to their anonymity. All the data was treated with confidentiality.

# CHAPTER 4: DATA ANALYSIS AND PRESENTATION

## 4.1 Introduction

This chapter presents results from data analysis together with discussions of research findings. Data was analyzed using descriptive statistics, Wilcoxon signed ranks test and correlation analysis. The independent variables were service quality dimensions specifically developed for container shipping lines namely, reliability, speed, responsiveness, and value. The dependent variable as was used in the study is customer satisfaction with repeat purchase, positive word of mouth, referral to other customers and brand loyalty as its measures.

## 4.2 Response rate

The study had a sample size of three hundred (300) respondents who work for freight forwarding companies in Kenya. A total of two hundred and seventy-three (273) responses were received. Four responses with partial fills were included in the count, and six were excluded as they provided partial answers with the lowest number of sections filled. Therefore, the response rate was 91% as indicated in table 4.1 which forms the basis for reporting and analysis.

**Table 4.1: Response Rate**

| Distributed | Completed Questionnaires | Response Rate |
|---|---|---|
| 300 | 273 | 91.0% |

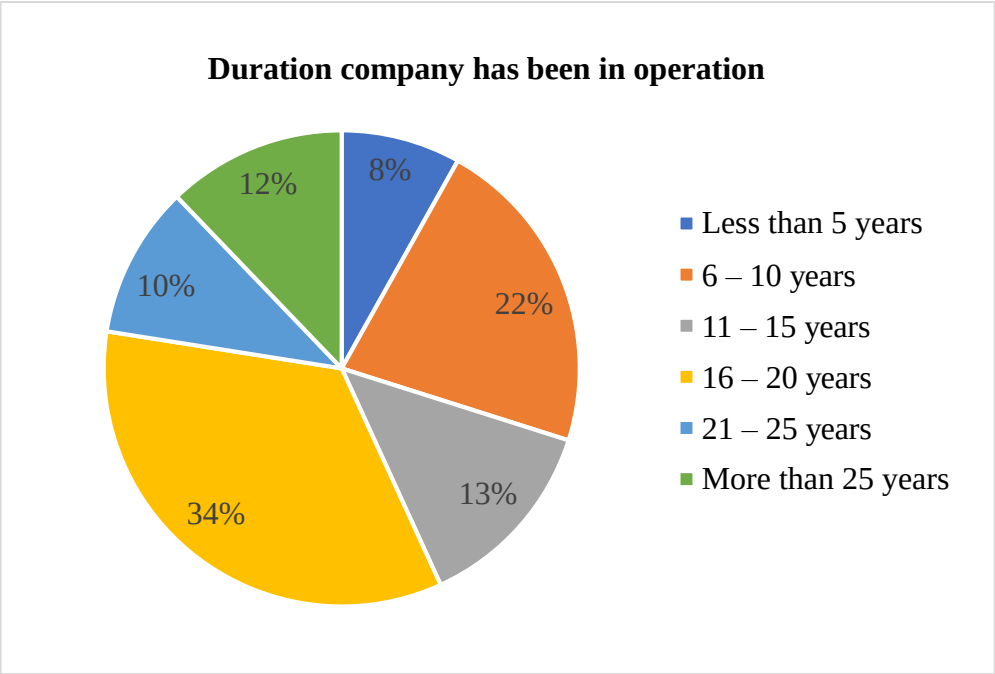
## 4.3 Descriptive Statistics

This section examines the profile of the respondents involved in the study to provide a general appreciation of the sample from which data was collected.

### 4.3.1 Duration the company has been in operation

Based on years in operation, there was representation in all categories. The greatest proportion of companies in the study was those in the 16 – 20 years bracket at 34%. The category 6 – 10 years followed closely at 22% then more or less a similar distribution across the rest of the categories with less than 5 years having the lowest portion at 8%. Given the representation of each category, it may be inferred that conclusions drawn from the data would not be biased towards a specific category (by years of existence) of companies. The results are shown in figure 4.1 below.

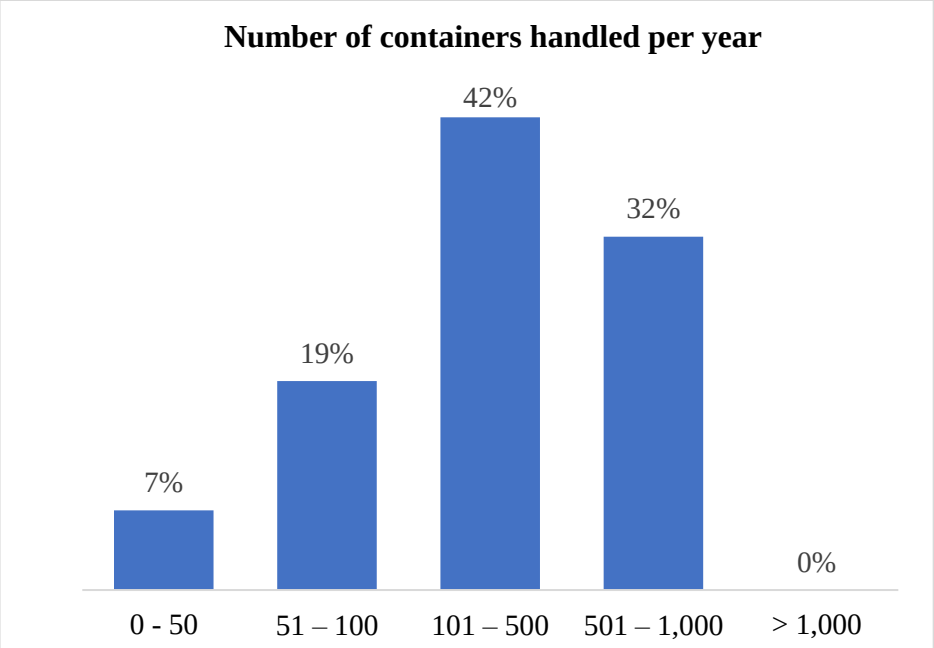
**Figure 4.1 Years of existence**




### 4.3.2 Company size by volume

Among the five categories provided, the largest proportion constituted companies that handle between 101 and 500 containers in a year constituting 42% of the sample, followed by the category 501 to 1,000 containers at 32%. Combined these two categories account for 74%, and using the lowest figure of 101 containers annually it translates to on average two containers a week. This gives the researcher confidence that the study population can be relied upon to meet the research objectives as a large proportion of respondents experience the services offered by container shipping lines on a regular basis throughout the year. The category of 51 -100 containers summed up to 19% and 0 – 50 containers summed up to 7%. The categories more than 1,000 containers annually did not register any respondents which may be inferred that majority of the freight forwarding companies fall in the small to medium enterprise category. See figure 4.2 below.

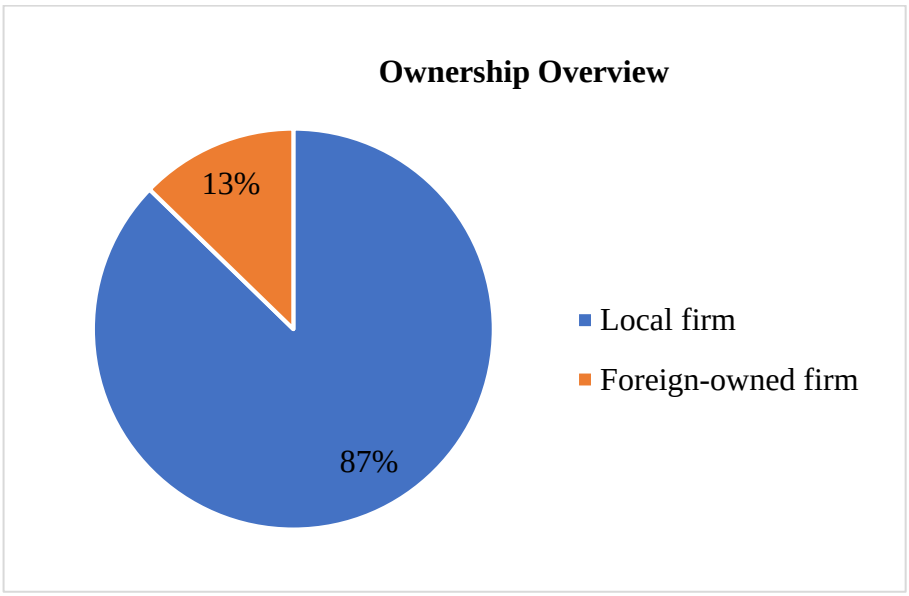
**Figure 4.2 Company size by volume**




### 4.3.3 Proportion by Ownership

The data in this section demonstrates that majority of freight forwarding companies are locally owned, only 13% of the respondents in the sample work for foreign-owned companies. This may be inferred to be a reflection of section 16 of the Merchant Shipping Act in Kenya that prohibits ship owners and shipping lines from engaging in other auxiliary maritime services such as pilotage, clearing and forwarding agent, quayside service provider etc. The proportions are depicted in figure 4.3 below.

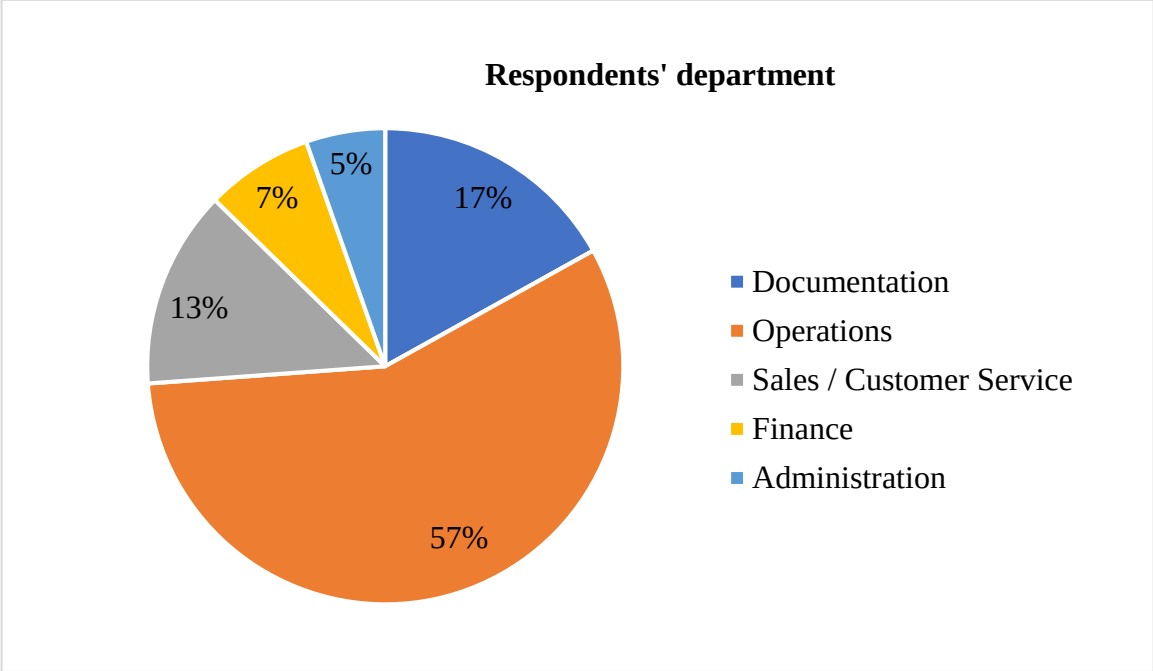
**Figure 4.3 Local or Foreign-owned firm**



### 4.3.4 Overview of respondents' departments

The study also sought to establish the respondents' departments. Operations department registered the highest number of respondents at 57% and the fewest respondents fell in the administration department at 5%. This section denotes that people in the field were more willing to respond than those in offices. The data collection sites that were most yielding namely Mombasa port, Nairobi Inland Container Depot, and some service areas in the offices of container shipping lines, where access was secured, would typically be frequented by the people in the operations department. See figure 4.4 below.

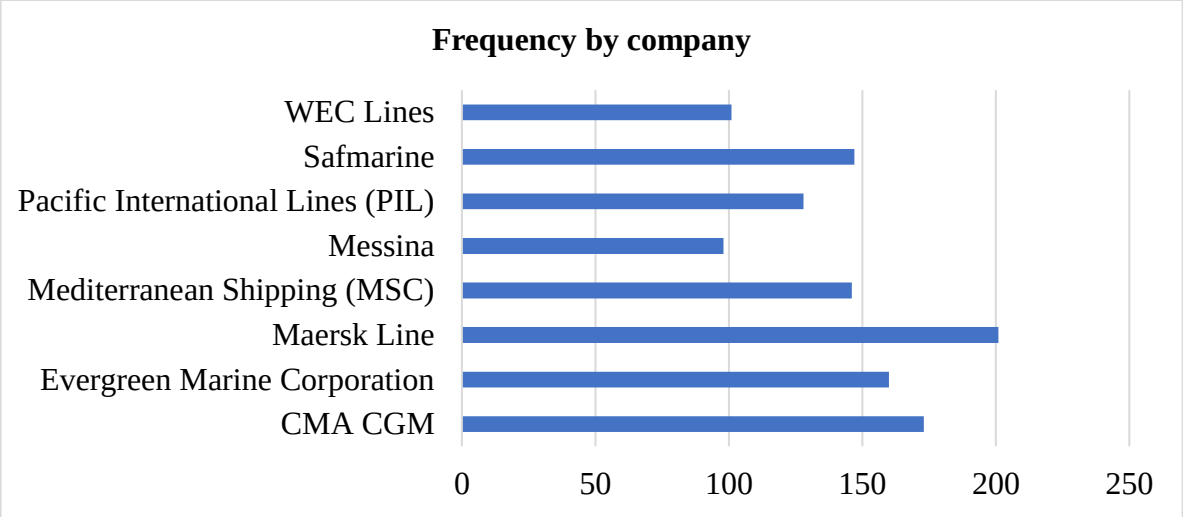
**Figure 4.4. Overview of respondents' department**




### 4.3.5 All container shipping lines in the market

Respondents were asked to indicate the various container shipping lines that they engage with from a total of eight companies. Maersk was the most cited with 201 responses, closely followed by CMA CGA at 171 responses. Given the significant representation of the two companies, it may infer they are among the most commonly used. The least cited brand was Messina with 98 responses. The various responses per container shipping line are depicted in figure 4.5 below.

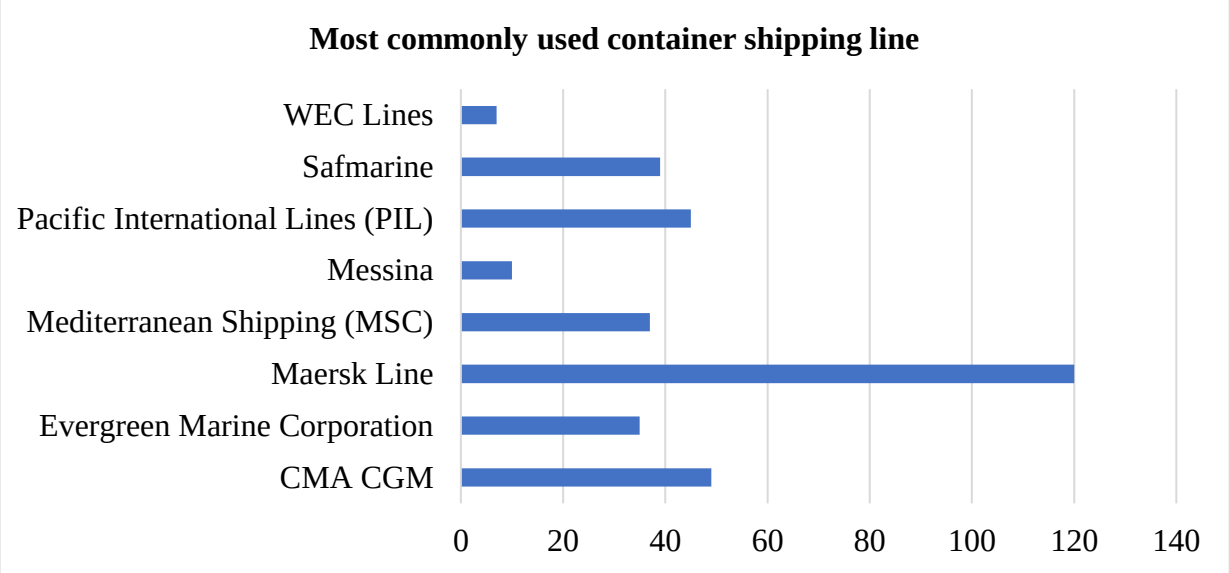
**Figure 4.5 Frequency by company**




### 4.3.6 Most commonly used container shipping line

In assessing the most frequently used company, it emerged that Maersk Line was the most commonly cited with a difference of 152 respondents from the second most cited company – CMA CGM. The least cited company was WEC Lines with seven responses. It was however noted that responses in this section were not mutually exclusive – some respondents indicated more than one company as the most frequently used despite direction indicating that only one company should be cited. This provides comfort that the views collected from the study are representative of all container shipping lines. Figure 4.6 below shows the various responses per company.

**Figure 4.6 Primary container shipping line**



### 4.4 Service quality dimensions most valued by customers of container shipping lines

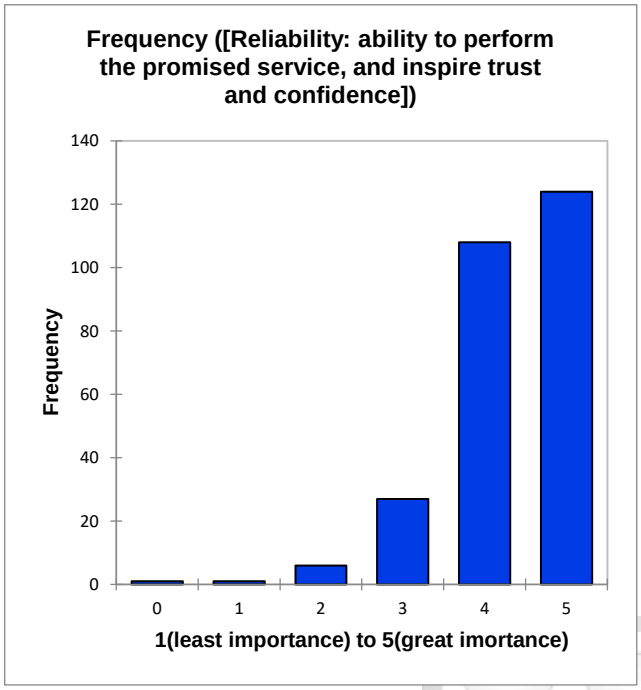
The research study sought to determine the service quality dimensions most valued by freight forwarders. A five-point Likert scale, ranging from one as “least important” to five as “very important” was used and the findings are summarized in table 4.2 below.

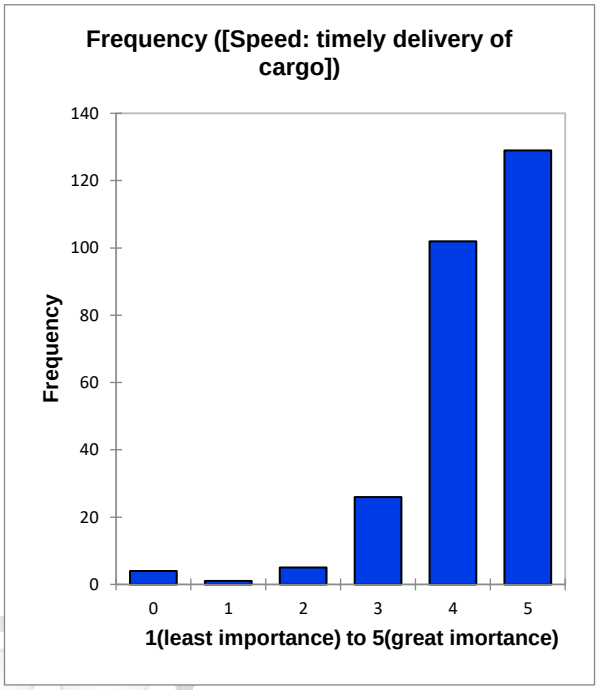
**Table 4.2 Most valued service quality dimensions**

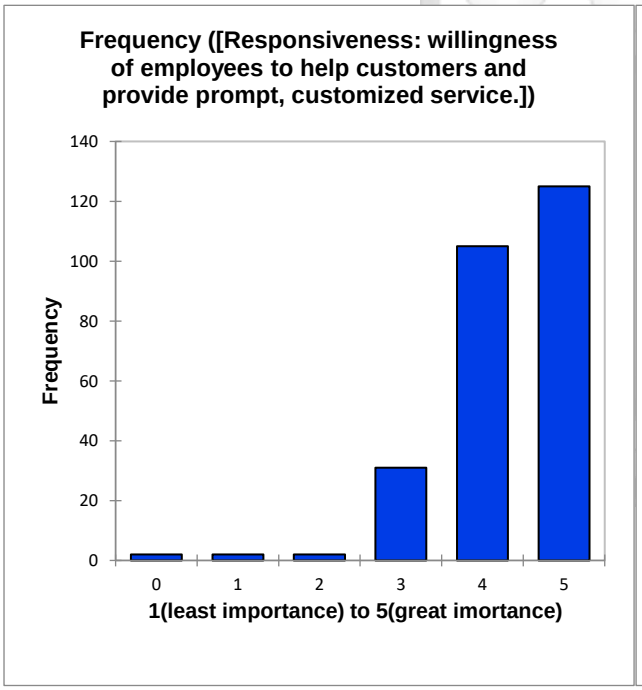
| Statistic | Reliability | Speed | Responsiveness | Value |
|---|---|---|---|---|
| Median | 4.000 | 4.000 | 4.000 | 4.000 |
| Mean | 4.292 | 4.277 | 4.285 | 4.112 |
| Variance (n-1) | 0.666 | 0.855 | 0.723 | 1.160 |
| Standard deviation (n-1) | 0.816 | 0.925 | 0.850 | 1.077 |
| Skewness (Pearson) | -1.413 | -1.976 | -1.681 | -1.779 |

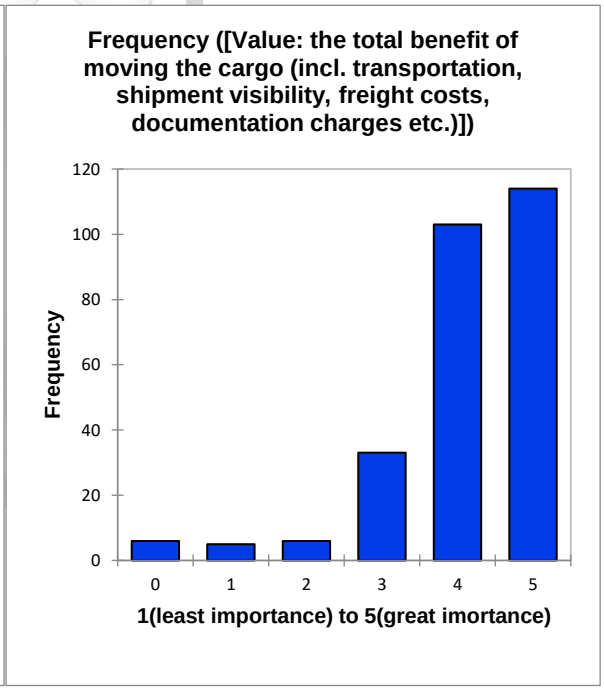
Whereas it was impossible to distinguish the importance of the dimensions using the median, it emerged that the categories presented different means with reliability emerging as the most important dimension, responsiveness was the second most important, speed was third and value the least important dimension. As reported in table 4.2 responses for each dimension were skewed with most answers falling into the category "important" and "very important". The similarity in median ratings for the four dimensions and the closeness of the mean and median for the same infers that the general view was that all of the dimensions were of importance from the forwarders perspectives. The similarity in perception of importance is further highlighted in figure 4.7 which provides graphical representation of the responses.

**Figure 4.7 Importance of service quality dimensions**




### 4.5 Relationship between service quality and customer satisfaction

The second objective of the study – to assess the relationship between service quality and customer satisfaction in container shipping lines – was addressed in two steps. The first involved the assessment of the gap between customer expectation and perception using Wilcoxon's rank test whereas the second involved the use of Spearman's rank test to assess the relationship between the variables.

### 4.5.1 The extent of customers' satisfaction with services offered by container shipping lines

The data collected in sections B and C of the questionnaire pertained to the importance and perception of quality, respectively, under the dimensions – reliability, speed, responsiveness, and value. Owing to the skew and ordinal nature of the data, Wilcoxon Signed Ranks Test, an alternative for the paired Student's t-test for non-parametric and ordinal data was used. The results yielded are depicted in table 4.3 and 4.4.

**Table 4.3 Wilcoxon Signed Ranks Test**

| | | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|
| RELIABILITY [Reliability] | Negative Ranks | 86[a] | 51.80 | 4455.00 |
| | Positive Ranks | 17[b] | 53.00 | 901.00 |
| | Ties | 157[c] | | |
| | Total | 260 | | |
| SPEED [Speed] | Negative Ranks | 65[d] | 46.25 | 3006.50 |
| | Positive Ranks | 26[e] | 45.37 | 1179.50 |
| | Ties | 168[f] | | |
| | Total | 259 | | |
| RESPONSIVENESS [Responsiveness] | Negative Ranks | 70[g] | 48.55 | 3398.50 |
| | Positive Ranks | 22[h] | 39.98 | 879.50 |
| | Ties | 169[i] | | |
| | Total | 261 | | |
| VALUE [Value] | Negative Ranks | 54[j] | 39.97 | 2158.50 |
| | Positive Ranks | 27[k] | 43.06 | 1162.50 |
| | Ties | 168[l] | | |
| | Total | 249 | | |

a. RELIABILITY < [Reliability]
b. RELIABILITY > [Reliability]
c. RELIABILITY = [Reliability]
d. SPEED < [Speed]
e. SPEED > [Speed]
f. SPEED = [Speed]
g. RESPONSIVENESS < [Responsiveness]
h. RESPONSIVENESS > [Responsiveness]
i. RESPONSIVENESS = [Responsiveness]
j. VALUE < [Value]
k. VALUE > [Value]
l. VALUE = [Value]

Prior to establishing the relationship between service quality and customer satisfaction, a Wilcoxon's rank test was conducted to assess the extent of satisfaction (or lack thereof) among the respondents considering the service quality dimensions. The results are outlined in table 4.3 with letters "a" through "l" were used as symbols to indicate the comparison of ratings provided by each respondent for each dimension i.e. less than, equal, and greater than. The importance values are indicated in all-caps, whereas the aggregated perception scores are indicated in square brackets.

For the comparison of the expectation versus perception of the dimension “Reliability”; 157 respondents indicated similar scores for perception and expectation of service quality, 86 respondents indicated lower scores for perception than expectation, and 17 indicated higher scores in perception than expectation. For the dimension "Speed"; 168 indicated similar scores for perception and expectation, 65 indicated lower perception than expectation scores, and 26 indicated higher perception than expectation scores.

In assessing the dimension “Responsiveness”; 169 indicated similar scores for perception and expectation, 70 respondents had higher ratings for expectation than they did for the perception of quality as rendered by the service provider, and 22 respondents had higher perception scores than expectation scores. For the dimension "Value"; 54 respondents indicated higher ratings for expectation than perception scores, and 27 respondents indicated higher ratings for perception than expectations. 168 respondents had similar scores for both categories.

In summary, across all dimensions, most respondents indicated that their service expectations were fulfilled which in effect means that container shipping lines provide services that meet the expectations of most of their customers.

**Table 4.4 Test Statistic**

| | RELIABILITY [Reliability] | SPEED [Speed] | RESPONSIVENESS [Responsiveness] | VALUE [Value] |
|---|---|---|---|---|
| Z | -5.903[b] | -3.660[b] | -5.095[b] | -2.424[b] |
| Asymp. Sig. (2-tailed) | .000 | .000 | .000 | .015 |

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

The z-scores generated for each pairing were deemed significant at $\alpha = 0.05$ hence the null hypothesis of equality between the two categories – expectation and perception – was rejected.

### 4.5.2 Spearman's Rank Correlation

To establish the relationship between service quality dimensions and customer satisfaction, the mean of responses for each category was calculated per respondent and the resulting figure compared with respective responses on the various measures of customer satisfaction through Spearman's rank correlation. The results yielded are depicted in table 4.5 below.

**Table 4.5 Spearman's Rank Correlation Test**

| Spearman's rho | | Shipping Process | Repeat Purchase | Positive Word of Mouth | Referral to other customers | Brand Loyalty | Overall Positive Impression. | Overall Satisfaction |
|---|---|---|---|---|---|---|---|---|
| RELIABILITY | Correlation Coefficient | .613** | .665** | .598** | .741** | .593** | .575** | .555** |
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 61 | 61 | 61 | 61 | 60 | 60 | 61 |
| SPEED | Correlation Coefficient | .735** | .693** | .759** | .615** | .595** | .739** | .612** |
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 60 | 60 | 60 | 60 | 59 | 59 | 60 |
| RESPONSIVENESS | Correlation Coefficient | .762** | .619** | .525** | .616** | .604** | .545** | .707** |
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 61 | 61 | 61 | 61 | 60 | 60 | 61 |
| VALUE | Correlation Coefficient | .677** | .728** | .694** | .631** | .486** | .675** | .593** |
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 59 | 59 | 59 | 59 | 58 | 58 | 59 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | | | | |

The scale proposed by Lui et al. (2007) was used to assess the strength of the correlations between service quality dimensions and customer satisfaction - - .00-.19 “very weak” .20-.39 “weak” .40-.59 “moderate” .60-.79 “strong” .80-1.0 “very strong”. All the dimensions were found to be significantly correlated with various aspects of customer satisfaction at $\alpha = 0.05$. The strongest correlation was viewed between the dimension responsiveness and the customer satisfaction measure "shipping process" (0.762). The weakest correlation was observed between the dimension value and brand loyalty (0.486), which according to the scale, was deemed a moderate correlation.

Given that all correlations were deemed, at least, moderate, the overall observation is that improvement in service quality across all dimensions would result in improved customer satisfaction as measured by the improvement in the shipping process, re-purchase intent, positive word of mouth, referral to other customers, and brand loyalty.

The dimension reliability presented correlation coefficients of 0.613, 0.665, 0.598, 0.741, 0.593 0.575, and 0.555 with the customer satisfaction measures - Shipping Process, Repeat purchase, Positive word of mouth, Referral to other customers, Brand loyalty, Overall positive impression, and Overall satisfaction, respectively. Referral to other customers, as an indicator of satisfaction, was the strongest. This therefore indicates that the dimension could be leveraged to increase referrals for individual businesses.

The dimension speed presented correlation coefficients of 0.735, 0.693, 0.759, 0.615, 0.595, 0.739, 0.612, with the customer satisfaction measures - Shipping Process, Repeat purchase, Positive word of mouth, Referral to other customers, Brand loyalty, Overall positive impression, and Overall satisfaction, respectively. Positive word of mouth (0.759) and overall positive impression (0.759) were the strongest which indicates that the dimension (speed) can be relied upon as a driver of these customer satisfaction measures.

The dimension responsiveness presented correlation coefficients of 0.762, 0.619, 0.525, 0.616, 0.604, 0.545, 0.707, with the customer satisfaction measures - Shipping Process, Repeat purchase, Positive word of mouth, Referral to other customers, Brand loyalty, Overall positive impression, and Overall satisfaction, respectively. Shipping Process (0.762) was the strongest. It can be inferred that implementing strategies that would make it easier for customers in the various touchpoints of the shipping process can be relied upon to drive responsiveness.

The dimension value presented correlation coefficients of, 0.677, 0.728, 0.694, 0.631, 0.486, 0.675, 0.593 with the customer satisfaction indicators - Shipping Process, Repeat purchase, Positive word of mouth, Referral to other customers, Brand loyalty, Overall positive impression, and Overall satisfaction, respectively. Repeat purchase was the strongest which indicates that if customers can quantify the total benefit of moving the cargo they will purchase the product or service again and be willing to try new products.

# CHAPTER FIVE: DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

## 5.1 Introduction

The study sought to assess the influence of service quality on customer satisfaction in container shipping lines in Kenya. The objectives employed to this end were: (i) to determine the service quality dimensions most valued by customers of container shipping lines in Kenya, (ii) to assess the extent of customers' satisfaction with services offered by container shipping lines in Kenya, and (iii) to establish the relationship between service quality and customer satisfaction in container shipping lines in Kenya. This chapter presents a discussion of the findings from the study, draws conclusions arising from the findings and makes recommendations.

## 5.2 Discussion

This section summarizes the findings as per the specific objectives of the study.

### 5.2.1 Service quality dimensions most valued

The results of the data analysis based on the mean scores for each dimension showed that reliability was ranked as the most valued service quality dimension, followed by responsiveness, speed was ranked third and value ranked fourth. Linking this finding to the expectancy disconfirmation theory, it was evident that shipping companies, in particular, should assign importance to the dimensions as indicated in ranking by importance of this study in order to ensure that customers do not feel less satisfied (as indicated by lower ratings of after-service quality perception).

The findings of the study revealed that all the four service quality dimensions; reliability, responsiveness, speed, and value are valued by freight forwarders, which validates the model developed by Yuen and Thai, (2015). They all had a mean of above four, but it is worth noting that responsiveness emerged as the second most important factor in this study. In the study done by Yuen and Thai, (2015) it was ranked third. Balci et al., (2018) observed that in an increasingly competitive market with a high level of homogeneity where competition is mostly based on price, customer relations can be effectively used to compete in a bid to drive customer satisfaction.

This implies that strategies that improve the quality of service rendered should take priority over offering the lowest costs in the containerized shipping market. The aspect of price is covered under the dimension value, which was viewed as the least important, this finding is supported by the study

done by Othelius and Wemmert, (2013) that argued that for freight forwarders price was not necessarily the deciding factor when choosing between different shipping companies. Yuen and Thai, (2015) posit that cargoes transported by container shipping lines are generally high-value cargo and their overall logistics costs can be minimized by improving service attributes such as reliability, responsiveness, and speed.

### 5.2.3 Service Quality and Customer Satisfaction

This section is divided into two sub-sections – the extent of customer satisfaction with services offered by container shipping lines and the relationship between service quality and customer satisfaction.

#### 5.2.3.1 The extent of customer satisfaction with services offered by container shipping lines

The approach involved comparison of responses for "expectation" and "perception" to assess for a statistically significant difference. Most respondents in this study indicated equal ratings for both which means that in general freight forwarders are satisfied with the quality of services offered by container shipping lines. Considering the expectancy disconfirmation theory, this finding therefore established that there was no significant gap between what the customers expected and what they perceived as the quality of service received from container shipping lines.

The results support Lim, (1998) argument that introduction of containers standardized the quality of services offered by shipping lines. Standardization has been further strengthened by the global strategic alliances that have resulted in the core service being highly homogenous as container carriers seek to realize synergetic gains from their combined scale (Balci et al., 2018; Glave et al., 2014; Hoffmann, 2010; Kavussanos & Visvikis, 2016). Satisfied customers still find it easy to switch when a better offer comes along. For a customer to spread positive reviews about the company, repurchase the products or service, and refer other customers they need to move from being satisfied to being highly satisfied. High satisfaction creates an emotional bond with the brand driving loyalty (Jones & Sasser, 1995; Kotler & Keller, 2016). This implies that as much as the customers indicate that they are satisfied, container carriers should pursue high satisfaction for sustainable profitability. The results for the remaining respondents, for all dimensions, show that more were dissatisfied with the rendered services. If a customer is dissatisfied, they are more likely to abandon the company, and even spread negative reviews (Kotler & Keller, 2016). Those that were dissatisfied under the various dimensions were more than those that had their expectations surpassed.

The expectancy and perception scores were all found to be significant, hence, it may be inferred that there is a gap between customers' service expectations and their perception of services offered, and its tendency is towards dissatisfaction. Plugging the gap between expectation and perception can be a driver of customer satisfaction and a means to nurture loyalty among existing customers as well as to attract new customers.

#### 5.2.3.2 The relationship between service quality and customer satisfaction

The relationship between service quality dimensions and indicators of customer satisfaction was assessed through Spearman's Rank Correlation. Results indicated that all the dimensions were significantly correlated with customer satisfaction indicators; shipping process, positive word of mouth, repeat purchase, brand loyalty, and referral to other customers. Furthermore, it was observed that overall satisfaction rates were correlated with the dimensions of service quality. The strongest correlation was viewed between the dimension responsiveness and the customer satisfaction measure, shipping process. The weakest correlation was observed between the dimension value and brand loyalty.

Therefore, the general inference is that improvement in the quality of services would result in higher customer satisfaction and this would, in turn, result in improved profitability due to repeat purchase from existing customers, customers speaking positively about the brand, increased overall spending power by customers on the brand, and their willingness to recommend the product or service to other customers. This finding is in keeping with observations by multiple authors who observe that an improvement of the entire shipping process may result in increased customer satisfaction hence better survivability in a highly commoditized industry (Balci et al., 2018; Evers & Johnson, 2000; Rex et al., 2017). Another interesting observation is that the dimension responsiveness showed the highest correlation with the various indicators of customer satisfaction. According to Yuen and Thai, (2015) this dimension encapsulated the attributes speed of claims, the effectiveness of the sales team, promptness of customer service, and availability of a large selection of service offerings. This finding is in keeping with the view that customers are more knowledgeable, empowered and involved (Labrecque et al., 2013); hence require personalized service. Companies focusing on the various attributes of responsiveness are therefore poised to drive high satisfaction among existing customers and attract new customers.

## 5.3 Conclusion

This section provides conclusions for the study.

### 5.3.1 Service quality dimensions most valued

This order of importance captures the uniqueness of container shipping services where customers prioritize time-related (i.e. reliability and speed) and relationship-related (responsiveness) attributes over cost (value). The study results point to the emergence of responsiveness as an important dimension to consider in driving customer satisfaction. The research findings are aligned to past research studies in acknowledging that focus on aspects such as customer relations in a bid to improve customers perception of the quality of services rendered can be effectively used to compete in a bid to drive customer satisfaction (Yuen and Thai, 2015).

### 5.3.2 Service Quality and Customer Satisfaction

This section provides a discussion on the extent of customer satisfaction with services offered by container shipping lines and the nature of relationship between service quality and customer satisfaction.

#### 5.3.2.1 The extent of customer satisfaction with container shipping lines

The research study found that freight forwarders are generally satisfied with the quality of services offered by container shipping lines in Kenya. Since container shipping is based on standardization (i.e. containerization) it has provided safer, more reliable, faster and low-cost transportation. The unprecedented round of industry consolidation has also standardized the core-service offering. As much as customers are satisfied, they still find it easy to switch when a better offer comes along as indicated by the multiplicity of carriers they use. It is therefore imperative for container shipping lines to create an emotional bond with the customers, not just a rational preference, to build brand loyalty and achieve sustainable profitable growth.

#### 5.3.2.2 The relationship between service quality and customer satisfaction

The study found that all the service quality dimensions are significantly correlated with customer satisfaction indicators. The strongest correlation was viewed between the service quality dimension responsiveness and the customer satisfaction indicator, simplicity and lack of disruption. The weakest correlation was observed between the service quality dimension value and customer satisfaction indicator, brand loyalty. Based on these study findings and those of other researchers and academicians it can be concluded that responsiveness can be effectively used

to compete in a bid to drive customer satisfaction. This implies that strategies that improve the quality of service rendered should take priority over offering the lowest costs in the containerized shipping market. Cargo transported by container shipping lines are generally high-value cargo and their overall logistics costs can be minimized by improving service attributes such as reliability, responsiveness, and speed.

## 5.4 Recommendations

The study presents recommendations for container shipping lines in terms of policy and managerial implications.

### 5.4.1 Managerial Implications

Despite the findings that freight forwarders are generally satisfied with the quality of services offered by container shipping lines, satisfied customers still find it easy to switch when a better offer comes along which was inferred from the sample as most of the companies work with multiple shipping lines. The customers that were dissatisfied were more than those that had their expectations exceeded, hence, it was inferred that there was a gap between customer expectations and their perception of the quality of the services offered by container shipping lines, and its tendency is towards dissatisfaction.

This study, therefore, recommends that container shipping lines should explore opportunities that make them create an emotional bond with the customers, thereby, moving them from the level of being satisfied to high satisfaction in their efforts to drive profitability. They can do this through continuous training to ensure employees are well equipped to serve customers effectively. This is informed by the emergence of responsiveness as an important means to differentiate the quality of service. They should also make it a continuous research on customer needs an integral part of their processes with an aim of satisfying them effectively to gain a sustainable competitive advantage. Customers are more knowledgeable, empowered and involved hence require personalized service.

### 5.4.2 Policy Implications

Whilst the Merchant Shipping Act was drafted to protect the indigenous Kenyan players in the industry and the economy, section 16 of the act, restricts free trade and free competition within shipping, transport, and logistics in Kenya. It prevents vertical integration which has an impact on the efficiencies that could be gained by players offering an end-to-end total transportation

service. Intermediaries add to the total costs of doing business. As the regulators and policymakers continue to develop maritime policies, it is important for them to consider policies that address the needs of the end customer and those that aid economic activity for the country and the hinterland markets it serves.

### 5.5 Limitations of the study

The study was based on four service quality dimension developed by (Yuen & Thai, 2015). This restricted data collected and discussions to these four yet there may be other service quality attributes that may influence customer satisfaction, that are not included in the dimensions. Examples from the qualitative comments received include flexibility in place of cargo clearance, functionality on web access, policies on container deposit, extension of guarantee forms, and credit facilities were mentioned as areas of improvement to drive customer satisfaction.

The research was also based on a sample population from licensed customs agents, and hence may not be possible to generalize the findings to all containerized shipping line customers. For example, the service quality dimensions most valued by cargo owners may be different from freight forwarders as their needs are different.

### 5.6 Suggestions for future research

This study focused specifically on freight forwarders in Kenya. Further studies should be conducted with other stakeholders in the industry as main respondents or through incorporating a multiplicity of response categories. Furthermore, there is a need for exploration into non-SERVQUAL-centered quality assessment approaches given the multiplicity of sub-sectors in the shipping industry and the accompanying array of suggested quality assessment tools, most notably ROPMIS (Thai, 2008).

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# APPENDICES

## APPENDIX I: Ethics Review Board Approval

Strathmore UNIVERSITY

7th May 2018 SU-IRB 0213/18

**Vera Kereka Riitho**
P.O Box 6841-00300
Nairobi
Kenya.

Email: kereka.riitho@gmail.com

Dear Vera Kereka Riitho,

**REF** **Student Number:** MBA/93149/16 Protocol **ID:** SU-IRB 0213/18
**THE INFLUENCE OF SERVICE QUALITY ON CUSTOMER SATISFACTION: A STUDY OF CONTAINER SHIPPING LINES IN NAIROBI COUNTY**

We acknowledge receipt of your application documents to the Strathmore University Institutional Ethics Review Committee (SU-IERC) which includes:

1. Study Proposal dated March 2018
2. Participant Information and Consent form dated 26th April 2018
3. Study questionnaire dated March 2018
4. Cv

The committee has reviewed your application, and your study *"The Influence of Service Quality on Customer Satisfaction: A Study of Container Shipping Lines in Nairobi County"* has been granted **approval.**

This approval is valid for one year beginning **7th May 2018** until **6th May 2019.**

In case the study extends beyond one year, you are required to seek an extension of the Ethics approval prior to its expiry. You are required to submit any proposed changes to this proposal to SU-IERC for review and approval prior to implementation of any change.

SU-IERC should be notified when your study is complete.

Thank you

Sincerely,

Salim

Amina Salim

**Regulatory Affairs Fellow**

STRATHMORE UNIVERSITY ★ APPROVED ★ INSTITUTIONAL REVIEW BOARD

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## APPENDIX II: Participant Information Letter

Strathmore Business School

Tuesday, 27 March 2018

To whom it may concern

Dear Sir/Madam,

**RE: FACILITATION OF RESEARCH –VERA RIITHO**

This is to introduce Vera Riitho who is a Master of Business Administration student at Strathmore Business School, admission number MBA/ 93149/16. As part of our MBA Program, Vera is expected to do applied research and to undertake a project. This is in partial fulfilment of the requirements of the MBA course. To this effect, she would like to request for appropriate data from your organization.

Vera is undertaking a research paper on-: **"The influence of service quality on customer satisfaction: a study of container shipping lines from a freight forwarder perspective."** The information obtained from your organization shall be treated confidentially and shall be used for academic purposes only.

Our MBA seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

We appreciate your support and we shall be willing to provide any further information if required.

Yours sincerely,

Muriithi Njogu.
Director – MBA Programs

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**APPENDIX II: Questionnaire**

**Instructions**

This questionnaire is a data collection tool for the study, "The Influence of Service Quality on Customer Satisfaction for Shipping Lines in Kenya."

Kindly answer the questions by putting a tick in the appropriate box or by writing in the space provided.

**Confidentiality**

All information collected will be treated as confidential and reference will not be made to any company or respondent in the report of this study.

## SECTION A: Demographic Information

This section seeks to collect some general demographic information about yourself and your employer. We value the information you provide, it's anonymous and it will remain confidential. **Please tick the answer that best describes you and your company.**

1. How many years has your company been established?

- ☐ Less than 5 years
- ☐ 6 – 10 years
- ☐ 11 – 15 years
- ☐ 16 – 20 years
- ☐ 21 – 25 years
- ☐ More than 25 years

2. How many containers does your company handle per year?

- ☐ 0 - 50
- ☐ 51 – 100
- ☐ 101 – 500
- ☐ 501 – 1,000
- ☐ > 1,000

3. What form of ownership does your company have?

- ☐ Local firm
- ☐ Foreign-owned firm

4. Which department within the company do you work in?

- ☐ Documentation
- ☐ Operations
- ☐ Sales / Customer Service
- ☐ Finance
- ☐ Administration

5. Kindly select all shipping lines you currently work with within this market.

- ☐ Maersk Line
- ☐ Mediterranean Shipping (MSC)
- ☐ CMA CGM
- ☐ Pacific International Lines (PIL)
- ☐ Safmarine
- ☐ Evergreen Marine Corporation
- ☐ Messina
- ☐ WEC Lines

6. Which shipping line handles most of your business? **Please select one**

- ☐ Maersk Line
- ☐ Mediterranean Shipping (MSC)
- ☐ CMA CGM
- ☐ Pacific International Lines (PIL)
- ☐ Safmarine
- ☐ Evergreen Marine Corporation
- ☐ Messina
- ☐ WEC Lines

**SECTION B: Service Quality Dimensions Most Valued**

This section seeks to understand how important different service quality dimensions are to you in ensuring your satisfaction with services offered by container shipping lines.

7. Please indicate the extent to which the following service quality dimensions are important to you. (on a scale of 1-5) where 1 = least important, 2 = somewhat important, 3 = neutral, 4 = important and 5 = very important).

| | **Least Important** | **Somewhat Important** | **Neutral** | **Important** | **Very Important** |
|---|---|---|---|---|---|
| **Reliability:** ability to perform the promised service, and inspire trust and confidence | | | | | |
| **Speed:** timely delivery of cargo | | | | | |
| **Responsiveness:** willingness of employees to help customers and provide prompt, customized service. | | | | | |
| **Value:** the total benefit of moving the cargo (incl. transportation, shipment visibility, freight costs, documentation charges etc.) | | | | | |

Others (please specify)

……

……

……

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……

**SECTION C: Service Quality and Customer Satisfaction**

This section seeks to understand how different service quality dimensions influences your level of satisfaction with the service provided by container shipping lines.

8. Please indicate the extent to which you agree with the following statements as they relate to service quality dimensions and your level of customer satisfaction with your **primary** shipping line (on a scale of 1-5) where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree).

| **Reliability** | **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
|---|---|---|---|---|---|
| My shipping line delivers the promised level of customer service consistently. | | | | | |
| I rarely have challenges with documentation which makes me satisfied. | | | | | |
| I rarely have challenges with my shipping invoices which makes me recommend the shipping line to my suppliers. | | | | | |
| My primary shipping line always delivers my cargo on time which enables me to meet my customers' requirements. | | | | | |
| **Speed** | | | | | |
| My primary shipping line offers me the fastest transit time and that's why l use them. | | | | | |
| I am happy with the sailing frequencies offered by my primary shipping line. | | | | | |
| I can accurately trace and track my cargo throughout its journey and this gives me the visibility that makes me happy. | | | | | |
| I can always get the equipment I need for my cargo hence my loyalty. | | | | | |

| **Reliability** | **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
|---|---|---|---|---|---|
| The sales personnel of my primary shipping line are knowledgeable, responsive and understand my business needs which gives me the confidence to work with my primary shipping line. | | | | | |
| My primary shipping line's customer service personnel are easily accessible, supportive and generally have a good attitude towards me as a customer which makes me satisfied. | | | | | |
| My primary shipping line offers me a wide selection of services to simplify my business needs. | | | | | |
| **Value** | | | | | |
| My primary shipping line offers me good value for my money hence my loyalty. | | | | | |
| I am satisfied by the condition of equipment provided by my primary shipping line. | | | | | |
| My primary shipping line takes great care in handling my cargo which gives me peace of mind. | | | | | |
| The environmental performance of my primary shipping line increases my business opportunities. | | | | | |
| My primary shipping line takes care of the local community. | | | | | |

| **Customer Satisfaction** | **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
|---|---|---|---|---|---|
| I am satisfied with my primary shipping line processes because they are simple to follow and not disruptive to my business. | | | | | |
| All things being equal, I intend to do more business with my primary shipping company because it provides me value for money. | | | | | |
| I say positive things about my primary shipping line to other people. | | | | | |
| I often recommend my primary shipping line to people outside of my company because of the quality of their services. | | | | | |
| I am unlikely to switch to another shipping line because of the relationship that I have with my primary shipping line. | | | | | |
| Overall, I have a good and positive impression of my primary shipping line. | | | | | |
| Overall, I am satisfied with the services offered by my primary shipping line. | | | | | |

Do you have any additional remarks you want to add concerning the services you have been receiving from your primary shipping line?

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**Thank you very much for your time and for participating in this study.**

**APPENDIX IV: List of Freight Forwarders**

ACCELER GLOBAL LOGISTICS LIMITED
ADROIT LOGISTICS LIMITED
AFRICALINK FORWARDERS KENYA LTD
AFRIQUE SHIPPING SERVICES LIMITED
AGILITY LOGISTICS LIMITED
AGS FRASERS AFRICAN INTERNATIONAL
AIR MARINE AND LAND TRADING LTD
AIR MENZIES INTERNATIONAL
AIRBAND CARGO FORWARDERS
ALFOST ENTERPRISES LTD
ALLIANCE LOGISTICS KENYA LIMITED
ALP NORTH LIMITED
ALPHA IMPEX LOGISTICS INTL LIMITED
ALPHA WORLD-WIDE FREIGHT LTD
ALUJO ENTERPRISES
AMARANTHA AGENCY LIMITED
AMBERTO AGENCIES LIMITED
AMEY TRADING COM LIMITED
ARAMEX KENYA LIMITED
ARICHEM LTD
ARNOP LOGISTICS COMPANY LIMITED
ATLANTIC LOGISTICS INTERNATIONAL LTD
BAABZ FREIGHT FORWARDERS LTD
BAHARI FORWARDERS
BAKOL FREIGHTERS
BANELS LOGISTICS LIMITED
BATA SHOE CO (KENYA) LTD
BAYLAND FREIGHT AGENCIES LTD
BEACHLINES LTD
BEACON MOVERS KENYA LTD
BECOZI INVESTMENTS
BEDI INVESTMENT LTD
BEEGEE KEY INVESTMENTS (K) LTD
EXPORT TRADING CO LTD
FAMO FORWARDERS LTD
FARIHMA TRADING COMPANY LIMITED
FIBER FREIGHT FORWARDERS
FILIKEN TRANSIT FORWARDERS LTD
FOX INTERNATIONAL LOGISTICS LTD
FREIGHT FORWARDERS LTD
FREIGHT IN TIME LIMITED
FREIGHT REACH SERVICES LTD
FREIGHT SHORE AGENCIES LTD
FREIGHTLOGIX KENYA LTD
FREIGHTWELL EXPRESS LIMITED
GALAXY LOGISTICS LIMITED
GATEWAY MARINE SERVICES LTD
GENERAL CARGO SERVICES LTD
GEOMWA EXPRESS CARGO LIMITED
GEORINE AGENCIES LTD
GIRAFFEE FORWARDERS
GLOBAL BUSINESS COMMANDERS LTD
GLOBAL CARGO MOVERS LIMITED
GLOBAL FREIGHT LOGISTICS LTD
GMK EAST AFRICA LIMITED
GOHOMU AGENCIES COMPANY LIMITED
GOLD WELL FORWARDERS
GOLDEN LION INTERNATIONAL LTD
GOVERNMENT CLEARING AND FORWARDING
GRAND AUTO KENYA LTD
GREATSPAN MARITIME SERVICES
GULF CROSS LIMITED
HABO AGENCIES LTD
HAMBU FREIGHT SERVICES LTD
HAMDI INTERNATIONAL LIMITED
HANSOL LOGISTICS KENYA LIMITED
MARK RIECH AFRICA LTD
MASCOT HOLDINGS LTD
MENHIR LTD
METSEC CABLES LTD
MIDWAVE FREIGHTERS
MILANO LOGISTICS LIMITED
MILESTONE CONSULTANTS LTD
MITCHELL COTTS FREIGHT (K) LTD
MNET STARS LIMITED
MOMBASA TIMES LOGISTICS LTD
MOMO CLEARING & FORWARDING CO LTD
MOONWALK INVESTEMENTS LTD
MORGAN AIR CARGO LIMITED
MORNING GLORY FREIGHT SERVICES LTD
MTAPANGA AGENCIES LTD
MTE KENYA LTD
MULTIPLE SOLUTIONS LIMITED
MURANGA FORWARDERS LTD
MUSTAFA FREIGHT FORWARDERS LTD
MUZDALIFA CLEARING AND FORWARDING
MWANGO CLEARING INVESTMENTS LTD
NAJMI CLEARING AND FORWARDING LTD
NEOSERVE LOGISTICS
NEW WAY INTERNATIONAL FORWARDERS
NEW WIDE GARMENTS KENYA EPZ LIMITED
NIBAL FREIGHTERS LTD
NZOIA FREIGHTERS LIMITED
OCEANLINE FREIGHTERS (EA) LTD
ODEX CHEMICALS LTD
ONGOING CARGO SERVICES LIMITED
OPTIMAX KENYA LIMITED
PACMA INVESTMENT LIMITED
PANALPINA KENYA LTD

| | | |
|---|---|---|
| BEMMS LTD | HARLS CARGO LOGISTICS LTD | PLANTECH KENYA LIMITED |
| BEST FAST CARGO KENYA LIMITED | HASMAD CARGO LIMITED | PORTLINK HOLDINGS LTD |
| BETTERMORE AGENCIES LTD | HOMELAND FREIGHT LTD | PORTS CONVEYORS LTD |
| BIMA CLEARING AND FORWARDING | HUBEI BROTHERS LIMITED | PRECISE LOGISTICS LTD |
| BLUEWAVE LOGISTICS SERVICES | ICEBERG MOVERS ENTERPRISES | PRETTY BABY LTD |
| BMG HOLDINGS LTD | ICRC LOGISTICS | PRIMEWAY LIMITED |
| BOLLORE TRANSPORT & LOGISTICS KENYA | ICRC MOMBASA LOGISTICS | PRIORITY LOGISTICS LTD |
| BONFIDE CANDF COMPANY LTD | IMPERIAL CARGO INTERNATIONAL LIMITED | RANK NETWORK AND LOGISTICS LTD |
| BORABU FREIGHT AND TRANSPORT SERVICE | IMPEX FREIGHT LTD | RAPAT FREIGHT K LTD |
| BURHANI EXPRESS LOGISTICS | INDEX CARGO LOGISTICS LIMITED | RAPID KATE SERVICES LTD |
| CALLFAST SERVICES LTD | INDUS LOGISTICS LTD | REALDREAM INTERNATIONAL LIMITED |
| CAPRICORN FREIGHT FORWARDERS LIMITED | INFUSION LOGISTICS KENYA LIMITED | REALTIME CARGO LTD |
| CARGO MASTERS | INLAND AFRICA LOGISTICS LTD | REGAL FREIGHTERS |
| CARGO MOVERS LIMITED | INTERCARGO TRADING LIMITED | RELIABLE FREIGHT SERVICES LTD |
| CARGOCARE INTERNATIONAL LTD | INTERFACE AGENCIES LIMITED | REMOVAL GOODS SERVICES (K) LIMITED |
| CARGODECK EA LTD | INTERPEL INVESTMENTS LIMITED | RENAISSANCE LTD |
| CARGOLOG (EA) LTD | INTRA SPEED ARCPRO KENYA LIMITED | RIANAB LOGISTICS LIMITED |
| CARGOMANIA LIMITED | INTRASPAX FREIGHTERS | RISING FREIGHT LTD |
| CARGOMASTERS(EA) LIMITED | INTRASPEED ARCPRO KENYA LTD | ROSMIK TRADING CO LTD |
| CARIBBEAN FREIGHT LTD | JACKEN LIMITED | SAHARRY LIMITED |
| CARJET KENYA LIMTED | JAGOMA LOGISTICS LTD | SAHUSA FREIGHTERS LIMITED |
| CEBIT CARGO | JASPA FREIGHT LIMITED | SAM AND SAN LOGISTICS |
| CHABS TRADE CONNECTIONS LTD | JAYS INVESTMENT COMPANY LTD | SASI INTERNATIONAL FREIGHT LOGISTICS |
| CHEMI & COTEX KENYA LIMITED | JIHAN FREIGHTERS LTD | SAWA INTERNATIONAL LIMITED |
| CHRYSAL AFRICA LTD | JOKIVIEW GENERAL KENYA LIMITED | SCALA ENTERPRISES LTD |
| COAST PROFESSIONAL FREIGHTERS LTD | JONERICS CARGO FORWARDERS LIMITED | SEA SKY EXPRESS LTD |
| COLLINS AND TIFFANY LTD | JOPAH INVESTMENTS LTD | SEABRIDGE FORWARDERS LTD |
| CONKEN CARGO FORWARDERS LTD | JORDAN FREIGHTERS LIMITED | SEALINE FORWARDERS |
| CONTINENTAL FREIGHTERS | JOWAKA SUPER LINKS | SEAWAY MARITIME LIMITED |
| CONTINENTAL LOGISTICS NETWORK | JSB CANDY AGENCIES LIMITED | SHAMAS MOTOR SPARES LTD |
| CORNERSTONE LTD | JUBILEE CLEARING AND FORWARDING | SIGINON GROUP LIMITED |
| CORONET CARGO LTD | JUWELLS TRADING COMPANY LTD | SINZA FREIGHT AND LOGISTICS LTD |
| CULZENBERG FORWARDERS LTD | K B FREIGHTERS LTD | SKYLUX LOGISTICS LIMITED |
| DALEXY FREIGHTERS LIMITED | KADMUS FREIGHT LOGISTICS LTD | SMART CARS LTD |
| DAMCO LOGISTICS KENYA LTD | KANZIZE LOGISTICS LIMITED | SMERALDO INVESTMENTS LTD |
| DANLEY LOGISTICS LTD | KATE FREIGHT AND TRAVEL LTD | SONGHONG FREIGHT SERVICES LIMITED |

| | | |
|---|---|---|
| DANLINK FREIGHTERS LIMITED | KENCONT | SPEEDEX LOGISTICS LTD |
| DAVKIT ENTERPRISES LIMITED | KENFREIGHT (EA) LTD | STERNER LOGISTICS LIMITED |
| DB SCHENKER | KENREVY CARGO LOGISTICS LIMITED | STRAIGHT LINE CARGO FORWARDERS LTD |
| DECCAN FREIGHT LOGISTICS LTD | KENSCO BUSINESS SOLUTIONS LTD | SUBUKIA HOLDINGS (K) LIMITED |
| DECENT LOGISTICS LIMITED | KENYA BONDED WAREHOUSE CO | SUMAN SHAKTI EPZ LIMITED |
| DEJAS ENTERPRISES LIMITED | KENYA TRADEX COMPANY LIMITED | SYLAS TOCHIM |
| DELTA EXPRESS LIMITED | KEY NAUT LOGISTICS LIMITED | TALLIENT LOGISTICS LTD |
| DELTA HANDLING SERVICES LIMITED | KIMM FREIGHTERS | TASTIC ENTERPRISES |
| DERRICKSON SYSTEMS LIMITED | KIMU FREIGHT AGENCIES LTD | TECHNO CONSTRUCT KENYA LTD |
| DESCOM SHIPPING LIMITED | KIPTEBEES FREIGHTERS LTD | TOP LEADER FORWARDERS LIMITED |
| DESTINY CONVEYORS LIMITED | KITAKA ENTERPRISES LIMITED | TOP-LINK LOGISTICS SERVICES LTD |
| DHANUSH FORWARDERS K LTD | KUEHNE + NAGEL LIMITED | TOWFIQ KENYA LIMITED |
| DHL GLOBAL FORWARDING KENYA LTD | KURTZ FREIGHTERS, TOURS AND SAFARIS | TRADE LINK LOGISTICS LTD |
| DIVERSE CARGO MARINE AND AIR C AND F | LANDMARK FREIGHT SERVICES LTD | TREASURE CARGO SERVICES |
| DODWELL AND CO EAST AFRICA LTD | LANDMARK PORT CONVEYORS | TWYFORD CERAMICS COMPANY LIMITED |
| DOT COM CONSULTANTS | LCL LOGISTIX (KENYA) LTD | UNICON LOGISTICS COMPANY LIMITED |
| DSV AIR AND SEA LTD | LILY LOGISTICS LTD | UNION EXPRESS LTD |
| DUNIYA FORWARDERS | LINKON INVESTMENTS LIMITED | UNION LOGISTICS LTD |
| DUPLEX FORWARDERS LIMITED | LIVLIT CO LTD | URGENT CARGO HANDLING LTD |
| EAST AFRICA CARGO LOGISTICS LTD | LOGENIX INTERNATIONAL | VINEP FORWARDERS LTD |
| EAST GLOBAL LOGISTICS K LTD | LOGISTICS LINK LTD | VISION ENTERPRISE |
| ECHKEN AGENCIES LIMITED | LOGISTICS THREE SIXTY-FIVE LIMITED | WARTON AGENCIES |
| ECU WORLDWIDE (KENYA) LTD | LOGWIN AIR AND OCEAN KENYA LIMITED | WESTERN LOGISTICS SERVICES |
| ELDOCOM AUTO SPARES LIMITED | LOWSEA INTERNATIONAL AGENCIES | WESTWIND FREIGHT SERVICES LTD |
| EQUIRAK LOGISTICS LIMITED | MACFREIGHT FORWARDERS COMPANY LIMITE | WETAA INVESTMENTS LIMITED |
| EVERLAST ENTERPRISES LTD | MACKENZIE MARITIME FORWARDERS LTD | WILLMON FREIGHT AGENCIES |
| EVERSTAN FREIGHT & LOGISTICS CO LTD | MACSIM CARGO SERVICES LIMITED | WISEWAY LOGISTICS LTD |
| EXCELLENT LOGISTICS LTD | MAGNETIC KENYA LIMITED | WORLD CLASS ENTERPRISES CO LTD |
| EXCELLENT SERVICE FREIGHTERS LIMITED | MANAQUIM CARGO CO LTD | WORLD TRADE FREIGHT |
| EXPOLANKA FREIGHT LTD | MAREBA EXPRESS CARGO LIMITED | YOLLA FREIGHTERS LIMITED |
| EXPORT CONSOLIDATION SERVICES K LTD | MARITIME FREIGHT CO LTD | ZEFT FREIGHTERS LTD |