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Mediating effect of customer satisfaction on the relationship between core service quality and behavioral intentions in liner shipping

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ABSTRACT

Liner shipping, which offers the door-to-door transportation service, has pre-determined departure, arrival and transfer ports and carries cargo mainly through container ships, has been playing a key role in the global cargo transportation industry for more than 60 years and is still growing rapidly. Therefore, understanding of the relationship between service quality, customer satisfaction and behavioral intentions in liner shipping is of critical importance for global competition. From this standpoint, this study aims to determine whether customer satisfaction creates an alternative effect through its mediating effect on the causal relationship between core service quality and customers' behavioral intentions in liner shipping sector. To do so, it obtains data through survey from forwarder companies that operate in Turkey and analyzes the obtained data using SPSS v22 and AMOS v22 statistical package software. This study concludes that core service quality has a positive effect on customer satisfaction and behavioral intentions, and that customer satisfaction has a mediating effect on the relationship between core service quality and behavioral intentions. It reveals that core service quality and customer satisfaction are important constructs for future behavioral intentions. In conclusion, this study suggests that business managers in liner shipping sector need to incorporate core services that will positively affect customer satisfaction in their marketing policies, and to engage in managerial activities that enhance customer satisfaction.

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1 Introduction

As a cost-efficient, reliable and safe mode of transportation, shipping is recognized as the cornerstone of international trade. Carrying more than 85% of cargo by volume and 70% by value, it is the most efficient form of transport (United Nations Conference on Trade and Development [UNCTAD], 2020). Shipping has been traditionally categorized into two: liner shipping with round-trip journeys that follow a predetermined route, and tramp shipping that does not have a fixed schedule between any pair of ports (Lobo, 2010).

Liner shipping, which offers the door-to-door transportation service, has pre-determined departure, arrival and transfer ports and carries cargo mainly through container ships, has been playing a key role in the global cargo transportation industry for more than 60 years and is still

growing rapidly. Thus, container shipments worldwide reached 150 million TEU in 2020 (UNCTAD, 2020). Given that container line operators or liner shipping operators that offer container transportation, deploy a large number of ships to navigate between ports, provide empty containers to shippers for cargo, and set sail from the port by following the specified voyage schedule, even if the ship is not fully loaded, it is quite costly to carry out liner shipping (Chao and Chen, 2015). Liner shipping operators, which operate in a very competitive market, are under a huge pressure to be able to provide sustainable competitive advantage and to enhance their performance and profitability (Lobo, 2010; Chao and Chen, 2015). For this reason, liner shipping operators seek to sign service contracts aimed at developing long-term relationships with their customers (import-export companies and forwarders) and securing stable volumes of cargo and to make

themselves indispensable in the eyes of their customers (Balci et al., 2019). For liner shipping operators to achieve this, it is necessary to understand what factors shape the behavioral intentions of their customers and to comprehend the relationships between these factors.

Many studies in the literature have investigated into the factors (antecedents) that affect the customer's behavioral intentions, which are an indicator enhancing the relationship of customers with a service business, maintaining such relationship and retaining customers, as well as into the correlations between the factors (Bhakar et al. 2015; Giovanis et al., 2013; Gil-Saura et al., 2018; Çetinkaya, 2017; Hoşgör and Cengiz, 2019; Kumar et al., 2014; Yadav et al. 2014; Zeithaml et al., 1996; Dölarslan, 2013). These afore-mentioned studies argue that the most important factor or determinant that affects behavioral intentions, such as repurchase intention, intention to remain loyal to the brand, to recommend the brand, to talk positively about it, and to pay a higher price, is customer satisfaction (CS) and they have a direct and positive effect (Bhakar et al. 2015; Angelova and Zekiri, 2011; Chao and Chen, 2015; Kiran and Diljit, 2011; Kumar et al., 2014, Sureshchandar et al. 2002; Yadav et al. 2014; Yuen and Thai, 2015; Lobo, 2010; Balci et al., 2019; Zeithamel et al., 1996). Some research claim that behavioral intentions (BI) indirectly and positively affect service quality through CS; in other words, it is argued that CS mediates the relationship between service quality and BI (Bhakar et al. 2015; Dölarslan, 2013; Tosun and Söyük, 2019; Giovanis et al., 2013; Li et al., 2011; Kumar et al., 2014).

Service quality is defined as “an attitude that results from the comparison between customer expectations and service performance” (Parasuraman et al., 1988; Kiran and Diljit, 2011), whereas CS refers to “the feeling they get when they experience a service that meets or exceeds the customer's expectations” (Sureshchandar et al., 2002). Research in various sectors report that the effect of the dimensions of service quality, which are multidimensional, on CS (Kang, 2006; Kang and James, 2004; Choi, et al., 2013, Dabholkar and Overby, 2005; Hussain and Ekiz, 2009) and on BI are not the same (Koo et al., 2008; Toosi et al., 2014; Chen and Kao, 2009; Collier and Bienstock, 2006; Hsieh and Hiang, 2004). It is claimed that this is due to the fact that the dimensions that affect or dominate service quality and the attributes that qualify these dimensions are different due to the inherent differences in service quality for various sectors (Powpaka, 1996; Kang, and Kim, 2009; Ko and Pastore, 2005). Therefore, understanding of these differences by sector will contribute both theoretically and in practice.

These different dimensions and attributes that affect service quality shape a customer's overall perception of service quality from the service business. Numerous studies in the literature agree that “core service quality (CSQ)” is the most influential or dominant dimension on the perceived overall quality of the service of a customer from a service business (Grönroos, 1984; Powpaka, 1996;

Kang and Kim, 2009; Brady and Cronin, 2001; Hsieh and Hiang, 2004; Koo et al., 2008; McDougall and Levesque, 2000). In the literature, CSQ, a dimension of service quality that focuses on the outcome of service action is defined in many ways as “customers' perception of the superiority of the service experience and evaluation that happens after service performance” (Brady and Cronin, 2001; Kang and James, 2004; Ko et al., 2005), “a customer's perception of what they actually get from a service provider as a result of their interaction with a service business and the quality of the outcome of service delivery” (Grönroos 1984; Powpaka, 1996) and “the benefit that the customers seek to obtain from the service provider or the value of the expectations they want to obtain at the end of the service process” (Philip and Hazlett, 1997; McDougall and Levesque, 2000). The concept of CSQ is also expressed as outcome quality (Powpaka, 1996; McDougall and Levesque, 2000; Chen and Kao, 2009; Toosi et al., 2014; Choi and Kim, 2013, Dabholkar and Overby, 2005) and technical quality (Grönroos, 1984; Kang, 2006; Kang and James, 2004).

Research have emphasized that CSQ, which is influential on service quality, is a concrete clue for the evaluation of service performance, and that the service a customer receives from the service business affects the overall perception of quality. These studies argue that if customers perceive CSQ, which is the result of service delivery, more positively, they are more satisfied with the business from which they receive the service, and that CSQ has a significant impact on CS (Brady and Cronin, 2001; Powpaka, 1996; Kang and James, 2004; Hsieh and Hiang, 2004).

It is also reported that customers have service purchasing behaviors based on their core service expectations. Further, research show that if a customer has a negative experience with the service provider, there are slight chances that s/he recommends and talks positively about that service provider to his/her friends or potential other customers, and he or she does not repurchase from that provider. (Koo et al., 2008; Hsieh and Hiang, 2004; Kang and James, 2004; Collier and Bienstock, 2006). CSQ is reported to have a significant impact on purchasing BI (re-purchase, recommendations to others, positive talking). Certain research also indicate that CS has a mediating role of CS in the impact of CSQ on BI (Chen and Kao, 2009; Koo et al., 2008; Toosi, et al., 2014, McDougall and Levesque 1994). The mediating role of CS in the relationship between CSQ and behavioral intentions means that satisfaction is more closely related to the customer's behavioral intentions than to the CSQ perception (Chen and Kao, 2009; Koo et al., 2008; Toosi, et al., 2014). Research that report that CSQ indirectly affects BI through CS conclude that there is a cause and effect relationship between the antecedents that affect BI (Brady and Cronin, 2001; McDougall and Levesque, 2000; Choi and Kim, 2013; Hsieh and Hiang, 2004; Hussain and Ekiz, 2009).

As reported, CSQ directly and positively affects both CS (Hsieh and Hiang, 2004; Choi and Kim 2013; Kang, and

James, 2004; Choi, et al., 2013, Dabholkar 2005; Hussain and Ekiz, 2009), and BI (McDougall and Levesque, 2000; Koo, et al., 2008; Toosi, et al., 2014; Chen and Kao, 2009; Collier and Bienstock, 2006, Hsieh and Hiang 2004); further, CSQ indirectly and positively affects BI through CS (Chen and Kao, 2009; Koo et al., 2008; Toosi, et al., 2014, McDougall and Levesque, 2000). Although numerous studies have examined the mediating role of CS creates an alternative effect on the direct and indirect relationship of CSQ and customer behavioral intentions in various service sectors, there has been no such study across national and international scale in the liner shipping, which offers services in a highly competitive environment. Thus, this study seeks to determine whether CS creates an alternative effect on the relationship between BI and CSQ of customers who use the services of liner shipping operators through the mediating role of CS. To do so, this study obtains data through a survey from forwarders, which are the customers of liner shipping operators. Forwarders act as intermediaries between export/import companies and liner shipping operators, and also act as a shipper from the perspective of liner shipping operators (Lin et al., 2017; Song, 2021). Forwarder companies, which manage and organize the transport of cargo, act as intermediaries between the shippers (exporters/importers) and the carriers (ship operators). While forwarders are carriers from the perspective of shippers, they are considered as shippers from the perspective of carrier companies and called shippers. Today, more than 80% of the transport activities in the liner shipping market are carried out through forwarder companies (Balci et al., 2019); for this reason, this study has been performed with forwarders. The lack of research on the mediating effect of CS in the relationship between CSQ and BI of customers in the liner shipping in the national and international literature further adds to the significance of this study. Hence, the results of this study will hopefully be of great use for the business managers and marketing managers of liner shipping operators.

2 Conceptual framework and hypotheses

In this section, after the variables that are the subject of the research are explained conceptually, the relations between these variables, and research hypotheses are formulated.

2.1 Core service quality

Grönroos (1984), who conducted the first study on core service quality, stated that CSQ is related to the technical quality obtained from the production process of the service, and that technical quality refers to the outcome. He defined technical quality as “the answer to the question of what the customer actually receives from their interaction with the service business.” He also noted that the technical quality of a service significantly affects customer perceptions of service quality.

Following Grönroos (1984), many studies have been performed on this concept. In the literature, the concept of CSQ has been described as “evaluation that happens after service performance and customers’ perception of the superiority of the service experience” (Brady and Cronin, 2001; Kang and James, 2004; Ko et al., 2005), “the benefit that customers (consumers) want to obtain from the service provider or what they expect from the service process” (Phillip and Hazlett, 1997; McDougall and Levesque, 2000), and “the answer to the question of what a customer is really looking for from the service provider at the end of a service provision or what is delivered or offered to the customer by the service provider” (Powpaka, 1996; Tosun and Söyük 2019).

Core services are expressed as the actual services or real services that customers need, and these services are utilitarian services, not hedonic services (Sureshchandar, et al., 2002; McDougall and Levesque, 2000; Hanzae and Rezaeyeh, 2013). Grönroos (1984) put forward that the core quality of a service includes the “technical” or “outcome-related” aspects of a service. It is also suggested that the technical or outcome-related aspects of a service are referred to as the “service product” (Brady and Cronin, 2001, Kang and Kim, 2009). Customers purchase a service arguably based on their expectations of the result of the service experience (Collier and Bienstock, 2006; Brady and Cronin, 2001). In relation to CSQ, it is reported that services with quality of experience are services that can only be accurately and efficiently evaluated after the services are purchased and consumed (Powpaka, 1996; Hsieh and Hiang, 2004). Various research in the literature conceptualize the concept of CSQ as outcome quality (Powpaka, 1996; McDougall and Levesque, 2000); Hsieh and Hiang, 2004; Hussain and Ekiz, 2009; Chen and Kao, 2009; Toosi et al., 2014; Choi and Kim, 2013; Dabholkar and Overby, 2005) and technical quality (Grönroos, 1984; Kang, 2006; Kang and James, 2004).

It has been reported that CSQ, which has a multidimensional nature, is one of the dimensions of service quality (Grönroos, 1984; McDougall and Levesque, 2000; Dabholkar, et al., 2005; Chen and Kao, 2009), has a very critical effect on the evaluation (perception) of the customer’s quality of service) and is a key decisive factor on customer satisfaction (Hsieh and Hiang, 2004; Choi and Kim, 2013; Kang and James, 2004; McDougall and Levesque, 2000; Koo and Kim, 2008) and behavioral intentions (Keshavarz et al., 2015; Foroughi et al., 2019; McDougall and Levesque, 2000; Koo and Kim, 2008; Toosi et al., 2014). These studies indicate that if customers positively perceive CSQ, they may be more satisfied with the service provider company, and this in turn, positively affects their behavioral intentions.

Some studies in the literature offered a hierarchical conceptualization of the dimensions of service quality, which is a multi-dimensional construct as follows: “core service quality and functional quality” (Grönroos, 1994; Kang and James 2004; Keshavarz et al., 2015; Foroughi

et al., 2019; McDougall and Levesque, 2000; Chen and Kao 2009, Toosi et al., 2014), “core service quality, functional quality, interaction quality” (Hsieh and Hiang, 2004; Collier and Bienstock, 2006), “core service quality, interaction quality, physical environment quality” (Brady and Cronin 2001, Koo and Kim, 2008). The dimension of CSQ has been studied by many researchers in different sectors based on different models and scales. As for the research in shipping sector, the dimension of CSQ has been included in the second dimension of the ROPMIS scale, which incorporates “resource, outcome, process, management, images and social responsibility” developed by Thai (2008). The “outcome” dimension in the ROPMIS scale, developed by Thai and proposed for use in maritime shipping, has been conceptualized as the “core quality of service” dimension in liner shipping. In addition to the criteria in the original scale of ROPMIS CSQ model by Thai, more detailed criteria (attributes) have been added to this scale, which is adapted to liner maritime shipping services. The dimension of CSQ, which is adapted to liner shipping services, consists of criteria (attributes) such as “safe and undamaged delivery of cargo, frequency of voyages, ability to comply with voyage schedules, short transit time of the cargo, freight pricing at competitive rates, discount on local costs, the capacity to send cargo to geographically specific points reliably, flexible container free time” (Thai, 2008; Ho et al., 2017; Fanam and Ackerly, 2019; Kannan et al., 2011; Yuen and Thai, 2015; Ding and Tsai, 2012). Since liner sea shipping operators offer logistics services to their customers, from the perspective of logistics, it is argued that the core services created by these criteria are the result of the performance of logistics services. These logistics services are considered as services that provide a competitive advantage, and operators are services that make a difference to their competitors (Zin et al., 2014). Review of the literature shows that these criteria underlying the dimension of CSQ are identified as mode selection in liner shipping and criteria adopted by shippers to select carriers (container shipping) (Zin et al. 2014, Fanam and Ackerly, 2019; Ding and Tsai, 2012; Kannan et al., 2011). As several studies on service industries in the literature ascertain that the most effective or dominant dimension on the overall quality perception is “core service quality” (Grönroos, 1984; Powpaka, 1996; Kang and Kim, 2009; Hsieh and Hiang, 2004), this study also draws on “core service quality” to represent service quality.

2.2 Customer satisfaction

Customer satisfaction has different definitions in the literature: “the feeling customers get when they experience a service that meets or exceeds their expectations” (Kiran and Diljit, 2011), “a cognitive and emotional response to an experienced service performance” (Yuen and Thai, 2015), “the extent of the customer’s positive feelings towards a service provider” (Kumar et al., 2014), “overall evaluation of a service by a customer based on their ex-

pectations” (Bhakar et al., 2015), “a customer’s feelings of pleasure or disappointment that results from comparing a product perceived performance in relation to his or her expectations” (Angelova and Zekiri, 2011), and “an attitude change resulting from the consumption experience” (Hanzaee and Rezaeyeh, 2013).

It is suggested that service quality is the most important antecedent of CS. Because previous research have indicated that there is a positive relationship between service quality and CS (Hanzaee and Rezaeyeh, 2013; Balci, et al., 2019; Lobo, 2010; Brady and Cronin, 2001; Yadav et al., 2014; Yuen and Thai, 2015; Grönroos, 1984). Satisfied customers are more likely to show loyalty to the service business through re-purchases or recommendation of the service to others. This, in turn, increases the financial profitability of that business. An increase in customer retention by 5%, can lead to an increase in product profitability from 25% to 95% (Uyar, 2019). Research in the literature conclude that quality dimensions in different service businesses have a varying effect on satisfaction. It is suggested in sectors which offer utilitarian services rather than hedonic services, that technical quality or CSQ has a stronger effect on satisfaction than functional quality (Hanzaee and Rezaeyeh, 2013). In liner shipping operators, which establish a highly competitive sector, customer satisfaction is essential for achieving financial profitability.

2.3 Behavioral intentions

Behavioral intentions are considered as an important factor in explaining consumer behavior. Looking at the concept of intent from the point of view of consumers or customers, it emerges between the processes of evaluating purchasing alternatives and of purchasing (Akkılıç et al., 2014). The concept of BI has been described differently in the literature as “prediction of behaviors through intentions” (Çetinkaya, 2017), “the extent to which a person formulates informed plans to perform or not perform a particular future behavior” (Hanzaee and Rezaeyeh, 2013), “an indication of whether customers will re-purchase a product or service from a business” (Akkılıç et al., 2014), “customer’s attitudes towards feedback on a product or the businesses that make that product available to the end user of the product” (Çolakoğlu and Köleoğlu), “an indication that customers are enhancing their relationship with a service business and will maintain this relationship” (Zeithamel et al., 1996).

Customer behavioral intentions, often measured as customer loyalty, are a key goal in marketing. As customer loyalty is evaluated through measurement of both behaviors and attitudes, the attitudinal measure of customer loyalty refers to the desire to pursue a relationship with a service provider (psychological commitment), while the behavioral perspective (loyalty) refers to being a regular customer (repurchase behavior). It is noted that it is difficult to measure behavioral loyalty in practice, and

therefore many researchers prefer using the concept of BI (Giovanis et al., 2013).

BI can be classified as positive and negative behavioral intentions. Positive behavioral intentions consist of intentions such as “repurchasing, recommending the service to others, positive word of mouth, paying higher prices.” In broader terms, positive behavioral intentions refer to behavioral intentions that represent customer loyalty (Hanzaee and Rezaeyeh, 2013; Zeithaml et al., 1996) and mean that s/he is more likely to show commitment to a service provider (Yuen and Thai, 2015). Negative behavioral intentions, on the other hand, include customers' intentions to talk negatively about the business, to switch to another business, to complain about the business, and to initiate legal action (Tosun and Söyük, 2019; Dölarlan, 2013; Hanzaee and Rezaeyeh, 2013). These intentions, which relate to the customers' behaviors, are presented in the literature as “dimensions of behavioral intentions” (Zeithamel et al., 1996; Akkılıç et al., 2014). Satisfied customers provide support to the company (showing their loyalty to the company) and exhibit positive behavioral intentions such as, repurchase, remaining a company customer for a long time, talking positively to others (acquaintances), paying a higher price (being less susceptible to price). Therefore, BI is recognized as the output of CS in the marketing literature (Yuen and Thai, 2015; Çetinkaya, 2017).

2.4 Relationship between core service quality, customer satisfaction and behavioral intentions

Research in the literature show that there are “antecedent”, “mediating” and “consequent” relationships between CSQ, CS and BI (Chen and Kao, 2009; Choi and Kim, 2013; Kang and James, 2004). Further, as there are cause-and-effect relationships between these constructs, CSQ positively affects CS (Hsieh and Hiang, 2004; Choi and Kim, 2013; Kang and James, 2004; McDougall and Levesque, 2000; Koo and Kim, 2008) and BI (Keshavarz et al., 2015; Foroughi et al., 2019; McDougall and Levesque, 2000, Koo and Kim, 2008; Toosi et al., 2014) and CSQ indirectly affects BI through CS (Chen and Kao, 2009; Toosi et al., 2014; Koo and Kim, 2008).

Hsieh and Hiang (2004) performed research in three service sectors (photography, banking and medical services) and investigated how the dimensions of service quality (core service quality, functional quality, interaction quality) affect trust and CS. These scholars also ascertain that the construct that affects satisfaction and trust most directly and positively is CSQ. That is, the findings of their study show that the dimension that is of relative greatest importance in the evaluation of service delivery for all three sectors is CSQ.

Choi and Kim (2013) analyzed how CS is affected by the dimensions of service quality (core service quality, interaction quality and peer-to-peer quality) in hospitals, which are a part of the service sector. Their findings indi-

cated that CSQ is of great importance in evaluating service delivery and has a positive impact on CS. This can mean that a higher (lower) level of CSQ is expected to increase (decrease) CS.

Kang and James (2004) studied Korean mobile phone users, and examined how three dimensions of service quality (core service quality, functional quality, image) affect CS. These scholars also found out that the construct that affects satisfaction and trust most directly and positively is CSQ. These being said, this study proposes hypothesis 1.

Hypothesis 1: Core service quality has a positive effect on customer satisfaction in liner shipping.

There are numerous studies that focus on the outcome of service action and analyze the relationships between the concepts of CSQ that show what the customer gains from service, and behavioral intentions. For example, Keshavarz et al. (2015) performed a study with a total of 417 tourists staying in four and five star hotels in Malaysia and aimed at examining the relationship between service quality dimensions (core service quality and functional quality), CS and loyalty, a dimension of BI. The findings of the study revealed that CSQ directly and positively affects loyalty.

To probe into the relationship between service quality dimensions (core service quality and process quality), satisfaction, delight and behavioral intentions, Foroughi et al., (2019) carried out a study with 379 fitness members on the services offered by fitness centers in Malaysia. The result of their research demonstrated that CSQ, which significantly affects the perception of service quality, has a direct and positive effect on BI.

McDougall and Levesque (2000) examined the relationship between dimensions of service quality (core service quality, functional quality), perceived value, CS and BI in four different service (dentist offices, hairdressers, car service, restaurants) sectors. Their research concluded that CSQ and perceived value are the most important antecedents of CS. It further proved that there are direct and positive relationships between CSQ and future behavioral intentions (McDougall and Levesque, 2000). Based on this, this study proposes hypothesis 2.

Hypothesis 2: Core service quality has a positive effect on behavioral intentions in liner shipping.

A number of studies have investigated the relationships between customer satisfaction, which is defined as a cognitive and emotional response to an experienced service performance (Yuen and Thai, 2015), and behavioral intentions. One of them, a study by Collier and Bienstock (2006), examined the relationship between CS and BI in terms of service quality (outcome quality, interaction quality, and functional quality) in website use for online retail customers. The findings of their study revealed that satisfaction has a positive effect on BI, as it ensures that customers intend to recommend it to friends, to revisit the site, and to buy from the retailer.

Chao and Chen (2015) explored the relationship between service quality, CS, loyalty and the cost of switching to another carrier (switching cost) in liner shipping industry. They concluded that service quality has a significant impact on CS, but its impact on customer loyalty is not significant. The key finding is that satisfaction has a positive effect on customer loyalty.

Shin et al., (2017) conducted a study on shippers, forwarders and third part logistics service providers in liner shipping in South Korea to investigate the relationship between CS and BI. The scholars reported that there is a strong and positive correlation between CS and BI. They stated that forwarders are more willing to maintain their existing relationship with carriers, in other words, container shipping companies. This study thus proposes hypothesis 3.

Hypothesis 3: Customer satisfaction has a positive effect on behavioral intentions in liner shipping.

Chen and Kao (2009) conducted a study to examine how CS and BI are affected by the dimensions of service quality (core service quality and functional quality) on online travel agencies in Taiwan. Their findings emphasized that CS is most positively affected by CSQ. It is also reported that both functional quality and CSQ are indirectly effective through satisfaction, but the indirect effect of functional quality on BI is greater. These findings imply that BI is the most effective predictor, as satisfaction has the greatest overall effect. Given that the antecedent of CS is service quality and its result is BI, there appears to be a cause-and-effect (causality) relationship between CS and CSQ.

Toosi et al., (2014) studied 241 football spectators to identify the effect of service quality (technical quality and functional quality) on BI through satisfaction. The findings of their study showed that CSQ has a positive effect on both customer satisfaction and BI, but also indirectly affects BI through the mediating effect of satisfaction.

Koo et al., (2008) performed a study to better understand the effect of services offered for women's college basketball on perceived service quality (core service, functional, and environmental quality) and to analyze the effect of satisfaction on BI regarding a customer's decision to return to a sporting event. They concluded that CSQ has the most positive effect on satisfaction and indirectly affects BI through satisfaction. Also, they revealed that CSQ of customers positively affects BI, but CSQ has a greater impact through the mediating role of satisfaction. In the literature, there are various studies that argue the mediating role of CS in the relationship between CSQ and BI. The mediating role of CS means that CS is more closely related to the customer's BI than to the perception of CSQ (Chen and Kao, 2009; Koo et al., 2008). These being said, this study proposes hypothesis 4.

Hypothesis 4: Core service quality has an indirect effect on behavioral intentions through the mediating effect of customer satisfaction in liner shipping.

3 Research method

3.1 Data collection and sampling

The data of this study were collected from the employees of the forwarders operating in Turkey from March to August, 2021 through snowball sampling method and voluntarily completed surveys. 71% of the participants are male (N: 202) and 88% (N: 250) are university graduates. The average age of the participants is 32.45 years (S=22.56) and the average of their work experience in the maritime sector is 9.21 years (S=9.4).

3.2 Measurement tools

The CSQ scale that this study draws on to collect data and consists of eight items (i.e., "The liner operator always has the ability to deliver the goods undamaged, without loss and safely") has been adapted from Thai (2008), Fanam and Ackerly (2019) and Kannan et al., (2011). The CS scale with four items (i.e., "The services offered by the liner operator have met our expectations") and the BI scale with five items (i.e., "I use positive statements about the services of the liner operator") have been adapted from Jang (2013) and Zin et al., (2014). This study evaluated the attitudes of the participants using these scales in the 5-point Likert form, which offers answers varying from 1: 'I completely disagree' to 5: 'I totally agree.'

3.3 Statistical analysis

This study, which seeks to explore the role of CS as a mediator in the relationship between CSQ and BI in liner shipping operators, draws on SPSS v22 to perform frequency analysis, averages, explanatory factor analysis, normality and reliability analysis and utilizes AMOS V22 statistical software through Bootstrap 5000 re-sampling method to carry out path analysis as well as the validity of the measurement model.

4 Findings

4.1 Testing measurement model

To explore the factor structure of the scales, this study carried out exploratory factor analyses (EFA), using the Varimax rotation and principal components analyses considering eigenvalues greater than 1, and found out the following results: CSQ scale (KMO=0.920; $\chi^2=1545.293$; df=28; $p<0.001$; factor loads varied between 0.713-0.851; total explained variance: 65.5%), CS scale (KMO=0.822; $\chi^2=618.043$; df=6; $p<0.001$; factor loads varied between 0.761-0.898; total explained variance: 73.3%). It further determined that the scale of BI (KMO=0.879; $\chi^2=959.810$; df=10; $p<0.001$; factor loads varied between 0.695-0.901; total explained variance: 72.9%) is a one-dimensional scale.

Table 1 CFA Goodness of Fit Indices

Scales	χ^2	df	χ^2/df	CFI	TLI	SRMR	RMSEA	Factor Loads
CSQ	73.727	18	4.096	0.964	0.944	0.034	0.094	0.619-0.840
CS	0.154	1	0.154	0.998	0.982	0.012	0.028	0.660-0.881
BI	14.509	5	2.902	0.990	0.980	0.017	0.078	0.698-0.795

Source: Authors

Table 2 Cronbach’s Alpha, Correlation, Skewness and Kurtosis Coefficients

	Mean	SD	CA	Skewness	Kurtosis	1	2	3
1. CSQ	3.842	0.722	0.922	-1.636	3.336	1		
2. CS	3.773	0.709	0.863	-1.639	3.673	0.746*	1	
3. BI	3.722	0.726	0.891	-1.553	3.185	0.738*	0.772*	1

*p< 0,01

Source: Authors

Table 1 presents the results of the confirmatory factor analyses (CFA) to confirm the factor structure of the scales following the EFA analyses. As clear from Table 1, the Goodness of Fit Indices of the scales in the measurement model are within the acceptable limit, and the measurement model is valid because the factor loads are greater than 0.50 and statistically significant (Hu and Bentler, 1999; Hair et al., 2014).

To test the reliability of the measurement model, this study calculated the Cronbach’s Alpha (CA) coefficients and concludes that the scales are reliable because the CA coefficients of the scales are greater than 0.70, which is the critical value. Also, Table 2 demonstrates that there are moderate and positive relationships between the variables, that their mean is moderate and the data are distributed normally (Hair et al., 2014; Kline, 2016).

4.2 Testing hypotheses

Figure 1 presents the results of the path analyses, which were conducted through AMOS v22 software using Bootstrap 5000 sampling method to reveal the mediating effect of CS in the relationship between CSQ and BI, as well as standardized regression coefficients (β) and the re-search model. As clear from Figure 1, the Goodness of Fit Indices of the model ($\chi^2/df=2.374$; CFI=0.961; TLI=0.953; SRMR=0.028; RMSEA=0.070) are within the acceptable limit (Hu and Bentler, 1999; Hair et al., 2014).

Figure 1 shows that CSQ positively affects both BI ($\beta=0.824$; $p<0.001$) and CS ($\beta=0.844$; $p<0.001$). Regarding the effect of CSQ with CS on BI, the figure further indicates that CSQ does not have any effect on BI ($\beta=0.048$; $p>0.05$), but CS has a significant effect on

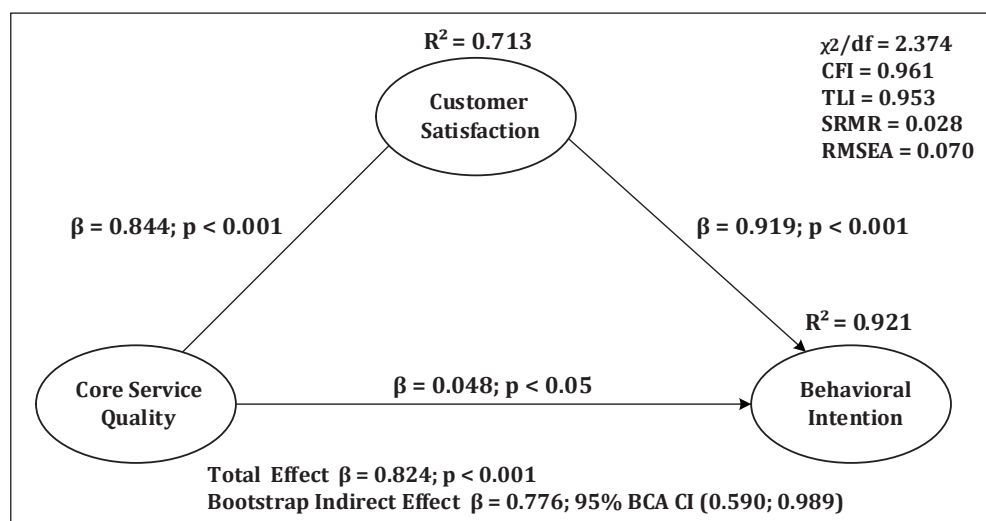


Figure 1 Research Model and Analysis Results

Source: Authors

BI ($\beta=0.919$; $p<0.001$). Besides, CSQ explains about 71% of the change in CS ($R^2=0.713$) whilst CSQ with CS explain approximately 92% of the change in BI ($R^2=0.921$). The confidence intervals, which were obtained from the test based on Bootstrap 500 sampling, were taken into consideration to determine whether CS has a mediating effect in the relationship between CSQ and BI. Hence, as the corrected bias and accelerated confidence interval (BCA CI) obtained through the Bootstrap analysis is significant ($\beta=0.776$; $p<0.05$; 95% BCA CI [0.590; 0.989]) and does not include zero, it is plausible to argue that CS has an intermediate role in the relationship between CSQ and BI (MacKinnon, Lockwood, and Williams, 2004). Based on these findings, the *Hypotheses 1, 2,3 and 4* have been accepted.

5 Conclusion and discussion

This study seeks to determine whether CS creates an alternative effect on the cause-and-effect relationship between CSQ and BI through its mediating effect in the liner shipping sector, where operators offer their services in a highly competitive environment. To that end, this study utilized the data collected from the employees of forwarder companies, which operate in Turkey, use the services of liner shipping operators and are customers of these operators. Recognizing that more than 80% of the transport activities in the liner shipping market are nowadays carried out through forwarder companies, this study has been performed with the employees of forwarder companies. The data obtained from 285 employees of forwarders were analyzed using Bootstrap 5000 re-sampling method in structural equation modeling through SPSS v22 and AMOS v22 statistical software; consequently, all four hypotheses proposed in this study were accepted. As this study is the first to measure the mediating effect of CS in the relationship between CSQ in liner shipping sector and the BI of customers in the national and international literature, it will hopefully offer important insights into the literature.

The findings of this study indicate that CSQ positively affects CS. This finding is congruent with the results of research conducted in different sectors (Hsieh and Hiang, 2004; Choi and Kim, 2013; Kang and James, 2004; McDougall and Levesque, 2000; Koo and Kim, 2008). This study also concluded that CSQ, a dimension of service quality developed for liner shipping, (safe and undamaged delivery of cargo, frequency of voyages, ability to comply with voyage schedules, short transit time of the cargo, freight pricing at competitive rates, discount on local costs, the capacity to send cargo to geographically specific points reliably, flexible container free time) has a positive effect on CS (of forwarders) and BI (repurchase, remaining a company customer for a long time, talking positively to others and paying a higher price). In a case where CSQ had a positive effect on CS, if liner shipping operators can deliver the cargo to the correct destination safely without

damage, has a frequent voyage schedule, complies with the previously announced voyage schedules, has short transit times, provides discounts on local costs, is flexible in terms of container free time, and can provide competitive freight pricing, the forwarders may have higher satisfaction. When CSQ has a positive effect on BI, a higher CSQ may lead to a more positive BI of forwarders, leading them to make repurchases, recommendations, talk positively and pay a higher price.

Another striking finding of this study is that CS has a positive effect on BI. As a result, satisfied customers have more positive BI. If customers are not satisfied, their BIs become negative. There would be a higher number of complaints about the business; customers may talk negatively about the business or prefer another business.

The results of this research conducted with forwarders are congruent with the findings of the studies performed in different sectors in the literature (Tosun and Söyük, 2019; Dölarıslan, 2013; Hanzae and Rezaeyeh, 2013; Keshavarz et al., 2015; Foroughi et al., 2019; McDougall and Levesque, 2000; Koo and Kim, 2008; Toosi et al., 2014).

The key finding of this study is that CSQ has a mediating effect on the BIs of forwarders through their satisfaction. This mediating effect implies that CSQ positively affects BI through CS, not directly, but indirectly. Further, this indirect effect means that the direct effect of CS on BI is greater than the direct effect of CSQ. In other words, the total effect of CSQ on BI is greater than its effect on CS. The indirect positive relationship identified between CSQ and BI may be interpreted as increased positive behavioral intentions of forwarders (loyalty, repurchase, intention to recommend, and paying a higher price), since a high quality core service is delivered when forwarders are satisfied. Hence, it can be argued that as CSQ increases, positive behavioral intentions may increase when CS is improved. Thus, this study ascertains that the cause-and-effect relationship of both CS and CSQ on BI in liner shipping and that the relationship between CS and BI is strengthened by CSQ.

CS has been previously recognized as a construct between CSQ and BI, by research in different sectors and considered as the most widely accepted mediating variable by researchers (Chen and Kao, 2009; Toosi et al., 2014; Koo and Kim, 2008; Bhakar, 2015). This mediating role of the variable of CS between CSQ and BI adds to existing studies on mediating in the literature. From this standpoint, the mediating effect of satisfaction has been also confirmed in liner shipping sector.

The findings of this study imply that the antecedents of BI in liner shipping sector are CSQ and CS and that there are positive interactions between CSQ, CS and BI. Such interaction offers important insights for the managers of liner shipping operators who seek to enhance BIs, which are critical for companies that operate in competitive environments, and to keep their customers stay with them, and it also helps these managers make managerial implications.

Business managers are recommended to highlight the core service properties (attributes) of CSQ, which is the determinant of CS and BI, such as safe and undamaged delivery of cargo, frequency of voyages, competitive freight pricing, discount on local costs, flexible container free time, transport time in marketing their liner shipping services. Business managers need to invest more in these CSQ-related core services, increase resource allocation, provide better core services than their competitors, and make a difference. Shortcomings related to core services should be eliminated and improved.

Another finding of this study suggests that liner shipping managers should recognize that CS is a key mediator between CSQ and BI. The businesses that offer liner shipping services need to focus on the finding that CS causes BI and that the effect of CSQ on BI is realized through the mediating effect of CS. Since CS is of strategic importance in achieving success and ensuring a sustainable competitive advantage in a competitive market and it allows them to have competitive advantage by increasing profitability. To create CS, all employees need to embrace CS as a culture. Thus, it is necessary to recognize the customer, listen to the customer, organize surveys and receive feedback about customer satisfaction, create solutions and policies for their complaints, if any (Tosun and Söyük, 2019). Also, a customer-oriented management approach is essential for creating CS. Without understanding the demands and needs of customers, improving service quality does not guarantee satisfaction. When customers receive a service that does not satisfy them, they cannot exhibit positive behavioral intentions such as repurchasing, recommending, talking positively and intention to pay a higher price.

This study has certain limitations as well as strengths. First, the survey in this study has been administered both to forwarders that act as intermediaries on behalf of exporters and importers and to those that act as shippers. Findings obtained from only one sector are not possible to generalize. Therefore, future studies may include export or import companies as well. Moreover, further studies may enrich the research model by incorporating other variables in addition to the dimension of CSQ, such as service quality, resources, process, management, corporate image and reputation, or company characteristics or cultural differences.

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