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Doctor of Philosophy (PhD)

**AN EMPIRICAL ANALYSIS OF RELATIONSHIP
MARKETING STRATEGIES IN THE MARITIME
LOGISTICS INDUSTRY**

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İzmir-2022

DECLARATION

I hereby declare that this doctoral thesis titled as “An Empirical Analysis of Relationship Marketing Strategies in the Maritime Logistics Industry” has been written by myself in accordance with the academic rules and ethical conduct. I also declare that all materials benefited in this thesis consist of the mentioned resources in the reference list. I verify all these with my honor.



Date

25/05/2022

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Signature

ABSTRACT
Doctoral Thesis
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Logistics Industry
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Dokuz Eylül University
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Department of Maritime Business Administration
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Container shipping lines must build long-term, mutually beneficial business relationships with their profitable customers to survive in an ever-changing and highly competitive environment of the maritime logistics industry. Long-term close relationships enable container shipping lines to gain a competitive advantage in the industry, as well as increase their logistics performance by positively affecting supply chain integration. One of the best tools for building such a relationship is to create a special relationship marketing program for profitable customers. However, it is unclear which relationship marketing strategies will be included in this program and whether these strategies have an impact on customer loyalty and collaboration.

This research investigates the dimensions of relationship marketing strategies, relationship quality and relationship marketing outcomes (i.e. customer loyalty and collaboration) in the maritime logistics industry and explores the impact of relationship marketing strategies on customer loyalty and collaboration. Additionally, this research examines the role of relationship quality in mediating the relationship between relationship marketing strategies, and customer loyalty and collaboration.

This research employs both a qualitative and quantitative methods. The theoretical model is built based on through literature reviews of relationship marketing literature and service industry studies. The proposed research model

is empirically tested with survey data using 208 responses from freight forwarders operate in Turkish maritime logistics industry by using structural equation modelling (SEM). The proposed model is statistically consistent, reliable, and valid, according to empirical results. As the result of the SEM analysis, it is found that the customer loyalty strategies and internal capability strategies performed by the container ship lines significantly affect the loyalty and collaboration of freight forwarders through the relationship quality.

Keywords: Relationship Marketing Strategy, Relationship Quality, Loyalty, Collaboration, Customer Value, Maritime Logistics



ÖZET
Doktora Tezi
Deniz Yolu Lojistiği Sektöründe İlişkisel Pazarlama Stratejilerinin Ampirik Bir
Analizi
Resul TEPE

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Konteyner gemi hatları, deniz yolu lojistiği sektörünün sürekli değişen ve son derece rekabetçi ortamında ayakta kalabilmek için karlı müşterileriyle uzun vadeli, karşılıklı yarar sağlayan iş ilişkileri kurmalıdır. Uzun dönemli yakın ilişkiler konteyner gemi hatlarının sektörde rekabet avantajı elde etmelerini sağlamanın yanı sıra tedarik zinciri entegrasyonunu da olumlu yönde etkileyerek lojistik performanslarını arttırmalarını sağlar. Böyle bir ilişki kurmanın en iyi araçlarından biri, karlı müşteriler için özel bir ilişkisel pazarlama programı oluşturmaktır. Ancak bu programda hangi ilişkisel pazarlama stratejilerinin yer alacağı ve bu stratejilerin müşteri sadakati ve işbirliği üzerinde bir etkisi olup olmadığı belirsizdir.

Bu araştırma, deniz yolu lojistiği endüstrisinde kullanılan ilişkisel pazarlama stratejilerinin, ilişki kalitesinin ve ilişkisel pazarlama çıktılarının (yani müşteri sadakati ve işbirliği) boyutlarını incelemekte ve ilişkisel pazarlama stratejilerinin müşteri sadakati ve işbirliği üzerindeki etkisini ortaya çıkarmaktadır. Araştırmada, ayrıca ilişkisel pazarlama stratejileri ile müşteri sadakati ve işbirliği arasındaki ilişkide ilişki kalitesinin aracılık rolü de incelenmektedir.

Bu araştırmada hem nitel hem de nicel yöntemler kullanılmaktadır. Teorik model, ilişkisel pazarlama ve hizmet sektörü araştırmalarının detaylı incelemelerine dayalı olarak oluşturulmuştur. Önerilen araştırma modeli, yapısal eşitlik modellemesi kullanılarak Türk deniz yolu lojistiği sektöründe

faaliyet gösteren taşıma işleri organizatörlerinden alınan cevaplardan oluşan 208 anket verisiyle ampirik olarak test edilmiştir. Önerilen model, test sonuçlara göre istatistiksel olarak tutarlı, güvenilir ve geçerlidir. Yapılan yapısal eşitlik modellemesi (YEM) analizi sonucunda, konteyner gemi hatları tarafından uygulanan müşteri sadakati stratejileri ve içsel yetkinlik stratejilerinin, ilişki kalitesi aracılığıyla taşıma işleri organizatörlerinin sadakatini ve işbirliğini önemli ölçüde etkilediği ortaya çıkmıştır.

Anahtar Kelimeler: İlişkisel Pazarlama Stratejisi, İlişki Kalitesi, Sadakat, İşbirliği, Müşteri Değeri, Deniz Yolu Lojistiği.



**AN EMPIRICAL ANALYSIS OF RELATIONSHIP MARKETING
STRATEGIES IN THE MARITIME LOGISTICS INDUSTRY**

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ABBREVIATIONS

APP.	Appendix
AVE	Average Variance Extracted
B2B	Business-to-Business
B2C	Business-to-Consumer
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CL	Customer Loyalty
COL	Collaboration
CR	Composite Reliability
C.R.	Critical Ratio
CRM	Customer Relationship Management
CSL	Container Shipping Line
CSMA	Corporate Sustainable Management Activities
EDI	Electronic Data Interchange
EFA	Exploratory Factor Analysis
FF	Freight Forwarder
IC	Internal Capability
ILT	Inland Terminal
IMP	Industrial Marketing Purchasing Group
KMO	Kaiser-Meyer-Olkin
LOY	Loyalty
MAH	Mahalanobis Distance
ML	Maximum Likelihood
LSP	Logistics Service Provider
NFI	Normed Fit Index
NFP	Not-for-Profit
RBV	Resource-Based View
R&D	Research and Development
RDT	Resource Dependence Theory
RQ	Relationship Quality

RM	Relationship Marketing
RMS	Relationship Marketing Strategies
RMSEA	Root Mean Square Error of Approximation
SCC	Supply Chain Collaboration
SCP	Supply Chain Performance
SCRQ	Supply Chain Relationship Quality
SCM	Supply Chain Management
S-D LOGIC	Service Dominant Logic
SEM	Structural Equation Modelling
SPSS	Statistical Package for the Social Sciences
SRMR	Standardised Root Mean Residual
TCT	Transaction Cost Theory
TEU	Twenty-foot Equivalent Unit
TLI	Tucker-Lewis Index
TRM	Trading Relationship Management
UTIKAD	Association of International Forwarding and Logistics Service Providers
YEM	Yapısal Eşitlik Modellemesi

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INTRODUCTION

a) Main Concept and General Aims of the Study

With the advancement of technology, globalization, and recent mergers and acquisitions in the maritime logistics industry, as well as the strong rivalry in the supply chain, strategic competitive advantage no longer depends exclusively on the fundamental characteristics of the service offered. The ‘relationship’ with the customer (or partner), which is more difficult to imitate, has gained importance. This changing situation has introduced businesses to the concept of ‘relationship marketing’. In the context of the supply chain, Ballantyne (1994: 3) has characterized relationship marketing as an evolving disciplinary framework for the creation, development and continuing of exchanges of value among the parties involved.

Relationship marketing may not be applied in every customer relationship, or it may be more profitable to develop a different marketing strategy in some customer relationships. Relationship marketing should be applied if it enables a firm to gain competitive advantage or contributes to firm’s marketing strategy. For a relationship to be long-term, it must be mutually beneficial for both parties. In order to build a mutually beneficial business relationship, it is critical for maritime logistics partners to recognize changes in their relationship, and to act on them where necessary.

This study, on the basis of the generic value chain that most influential tool for analyzing the sources of competitive advantage, identifies that a customer value focused relationship marketing strategies will be the most desirable alternative for decision maker to enhance customer loyalty. Maritime logistics partners need to develop long-term close relationships, especially with profitable customers, in the uncertain and fiercely competitive environment of maritime logistics. Building stronger relationships with customers is recommended as a way to ensure that companies survive uncertain or competitive market conditions (Webster, 1992; cited by Chaston et al., 2000; 625). According to Grönroos (1991), because relationship marketing emphasizes customized customer engagement, service and industrial goods businesses are more suited to relationship marketing than consumer goods businesses.

Long-term business relationships provide many potential benefits for maritime logistics partners. This study purposes that higher levels of customer relationship marketing strategy applications will lead to relationship quality improvement and, as a consequence, significance impact on customer loyalty. Many studies have shown that the profitability of a maritime logistics partner depends on relationship quality and loyalty between partners. In addition, the study aims to show that container shipping lines' customer relationship marketing strategies will have a significant impact on the freight forwarders' collaboration with container shipping lines. Maritime operators can be expected to maximize maritime logistics value by successfully implementing relationship marketing strategies. However, there has been a lack of research to actually measure firm's applications of such relationship marketing strategies and link it to customer-oriented outcome of relationship marketing in maritime logistics. The relationships we look at involve situations in which the freight forwarder has supplier relationships with container shipping line. Therefore, we consider the relational exchange between main maritime logistics partners except ports. Based on the resource dependency theory, it has been evaluated that the service provided by freight forwarders to shippers depends on the shipping service and knowledge provided by the container shipping lines because of freight forwarders role as an intermediary between the other two parties. Therefore, we propose that the efforts of freight forwarders to develop collaboration with container shipping lines are the result of this dependence.

As a result, management of maritime logistics providers faces difficulty to set a successful relationship marketing strategy and practice. They also don't know how this strategy leads to a change in customer behavior. Today in the maritime logistics industry, long-term relationship with the customer is a critical strategy as in other service industries. Maritime transportation service in Turkey traditionally plays a key role for the export-import trade. Turkey's maritime transportation rate, regarding cargo tonnage, is approximately 95% in total export, and 80% in total import (UTIKAD Logistics Industry Report, 2019). The relationship marketing situation in Turkey is not precisely defined in the context of maritime logistics. It is unclear how widespread these marketing methods are used by maritime logistics partners and how they could be really useful in gaining competitive advantage. Therefore, this study explore the

relationship marketing strategies performed by container shipping lines and its impact on customer loyalty and collaboration by proposing relationship quality as a mediator.

b) Research Questions

Long-term business relationships provide many potential benefits and competitive advantage for maritime logistics partners. Therefore, this study aims to examine impacts of relationship marketing strategy applications of container shipping lines on loyalty and collaboration of freight forwarders.

The main research question is “What are the impacts of a container shipping line’s relationship marketing strategies on loyalty and collaboration of a freight forwarder”. Additionally, this study examines the role of relationship quality as a mediator between relationship marketing strategies and customer loyalty and collaboration. Sub research questions are as follow:

- (1) How do the relationship marketing strategies form in the maritime logistics industry?
- (2) What are the determinants of relationship quality between exchange partners in the maritime logistics industry?
- (3) What are the freight forwarders’ perceptions of the relationship marketing strategies of container shipping lines?
- (4) How do relationship marketing strategies of container shipping lines affect loyalty of freight forwarders?
- (5) How do relationship marketing strategies of container shipping lines affect collaboration of freight forwarders?
- (6) How does relationship quality among freight forwarders and container shipping lines mediates this relationships?

c) Significance of the Study

The relationship assessment between maritime logistics partners contributes in a number of ways to the maritime logistics industry and relationship marketing literature. Firstly, this study has adapted a scale based on data acquired from both the

literature and a qualitative study, which includes container shipping lines' relationship marketing strategies. This scale can assist decision makers when creating relationship marketing program. Secondly, although relationship marketing is frequently discussed in the marketing literature, how a relationship marketing program can be applied in relations with customers and how these practices will affect customers have not been adequately investigated experimentally. It is clear that these relationship marketing programs have not been adequately examined in maritime logistics studies. Therefore, the study advances general knowledge of relationship marketing strategies and provides practical evidence from the maritime logistics industry. By focusing on maritime logistics value, the study evaluates result of long-term orientated and customer centric relationship marketing strategies on customer-based outcomes of relationship. Further, this study examines the mediating role of relationship quality on how the loyalty and collaboration of freight forwarders are affected by relationship marketing strategies of container shipping lines. Thus, this study provided important evidence for the literature on mediating role of relationship quality in relationship marketing studies.

CHAPTER ONE

RELATIONSHIP MARKETING STRATEGIES

This chapter examines the literature to understand the relationship marketing concept, its theoretical framework, differences from transactional marketing, and relationship marketing strategies.

This chapter proceeds as follows. Section one examines the relationship marketing concept consist of definition, historical development, purpose and importance, and benefits for both customer and supplier businesses. Second section presents theoretical background of relationship marketing and gives definition of some marketing and relationship based theories. Section three explains differences of relationship marketing from transactional marketing. Section four examines relationship marketing from the view of customer value and chapter ends with literature review of relationship marketing strategies.

1.1. RELATIONSHIP MARKETING CONCEPT

The concept of relationship marketing originated in the areas of service and industrial marketing and is based on the development and maintenance of relationships between sellers and buyers, as well as other market participants (Grönroos, 1994: 355). This concept has received widespread support in the marketing world where strategic competitive advantage can no longer be achieved based on fundamental product/service features (Barnes, 1994). Researchers have also shown that the profitability of organizations is highly tied to the satisfaction of existing customers (e.g. Reichheld & Sasser, 1990). Progressive companies have widely acknowledged that it is more profitable to keep existing customers satisfied instead of spending a high level of marketing efforts to acquire new customers (Barnes, 1994: 562). Basically, relationship marketing is a marketing approach that focuses on developing long-term, close relationships with partners, sustaining those ties, and jointly benefiting from the value provided by those relationships.

1.1.1. Definition of Relationship Marketing

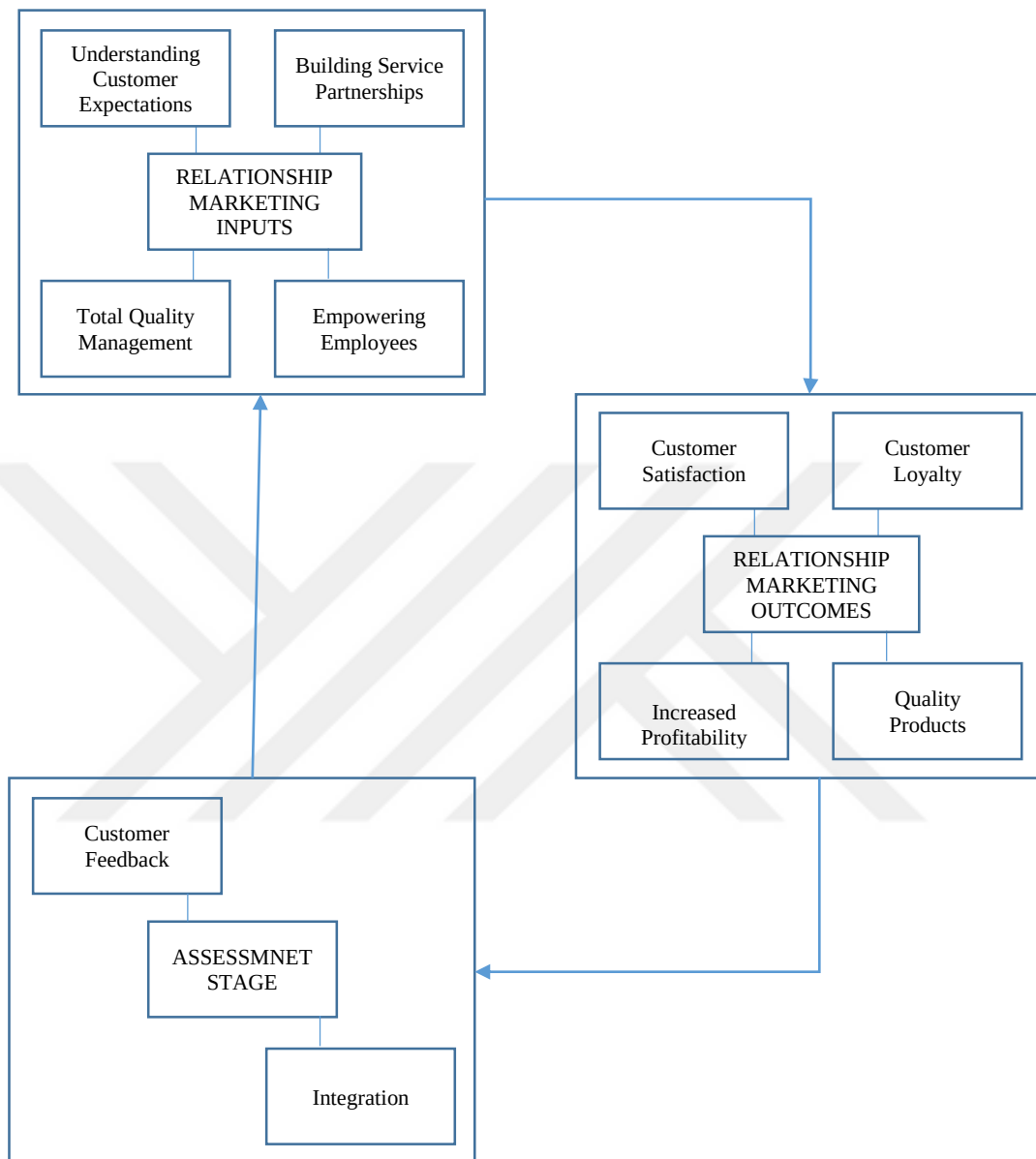
Due to relationship marketing's complexity, there is no commonly accepted definition. Relationship marketing is widely regarded as a customer-centric approach in which a business develops long-term commercial ties with both potential and existing customers (Evans & Laskin, 1994: 440). The primary goal of relationship marketing is to retain loyal customers within the organization and to reward their long-term performance (Kumar, 2014: 1047).

Berry proposed the first definition of relationship marketing within the context of service marketing in 1983. He defined relationship marketing as “attracting, maintaining and – in multi-service organizations – enhancing customer relationships”. He not only stressed the importance of attracting new customers but also explains its concern about retaining customers and allocating resources to retain customers and strengthen relationships (Gummesson, 2008: 330). In a more generalized definition of Morgan and Hunt, (1994: 22) relationship marketing defined as “all marketing activities directed toward establishing, developing, and maintaining successful relational exchanges”. Jackson, (1985: 165), from the B2B perspective, defined relationship marketing as “marketing to win, build and maintain strong lasting relationships with industrial customers”.

In the supply chain context, Ballantyne (1994: 3) defined relationship marketing as “an emergent disciplinary framework for creating, developing and sustaining exchanges of value, between the parties involved, whereby exchange relationships evolve to provide continuous and stable links in the supply chain”.

Shani and Chalasani (1992) signified the importance of building up a network strengthened with mutual benefits for special customers. They described relationship marketing as “an integrated effort to identify, maintain and build up a network with individual customers and to continuously strengthen the network for mutual benefits of both the sides, through interactive, individualized and value added contracts over a long period of time”. Evans and Laskin (1994: 440) figured out the early definitions of relationship marketing and developed effective relationship marketing model, which is depicted in figure 1.

Figure 1: Effective Relationship Marketing Model



Source: Evans and Laskin, 1994: 441.

The model's relationship process is comprised of inputs, outputs, and ongoing relationship evaluation. Relationship marketing motivates both parties (for example, supplier and customer or seller and buyer) to collaborate on a same set of objectives. To accomplish these aims, suppliers/vendors should: (1) comprehend customer needs; (2) treat customers as service partners; (3) guarantee that staff meets customer needs; and (4) serve customer with the best quality based on their particular needs. The

parties' success in the four aforementioned situations leads in the following advantages: (1) a greater proportion of satisfied customers, (2) increased customer loyalty, (3) the belief among a firm's customers that its items are of higher quality, and (4) more earnings for the seller. Due to the long-term nature of relationship marketing, firms must maintain continuous communication with customers to ensure goals are met and integrate the relationship marketing process into their strategic planning to better manage their resources and meet future customer needs (Evans & Laskin, 1994: 440).

In their definition of relationship marketing, Payne and Frow (2017) highlight the parties involved in the interaction. Relationship marketing, according to the authors, is the strategic management of relationships with all key stakeholders. These include customers, as well as suppliers, influencers, referral sources, internal markets, etc. Gummesson (2008) positions the relationship marketing definition on three components; interaction, network and relationship. He defines relationship marketing as “interaction in networks of relationships”. In relationships, both dyadic and complex, partners engage in active contact with one another, known as ‘interaction’. As defined by Sheth (1994), relationship marketing is “the understanding, explanation, and management of the ongoing collaborative business relationship between suppliers and customers”. All relationship marketing perspectives and definitions have as their central theme the emphasis on cooperative and collaborative relationships between the firm and its customers and/or other marketing actors (Parvatiyar & Sheth, 1999).

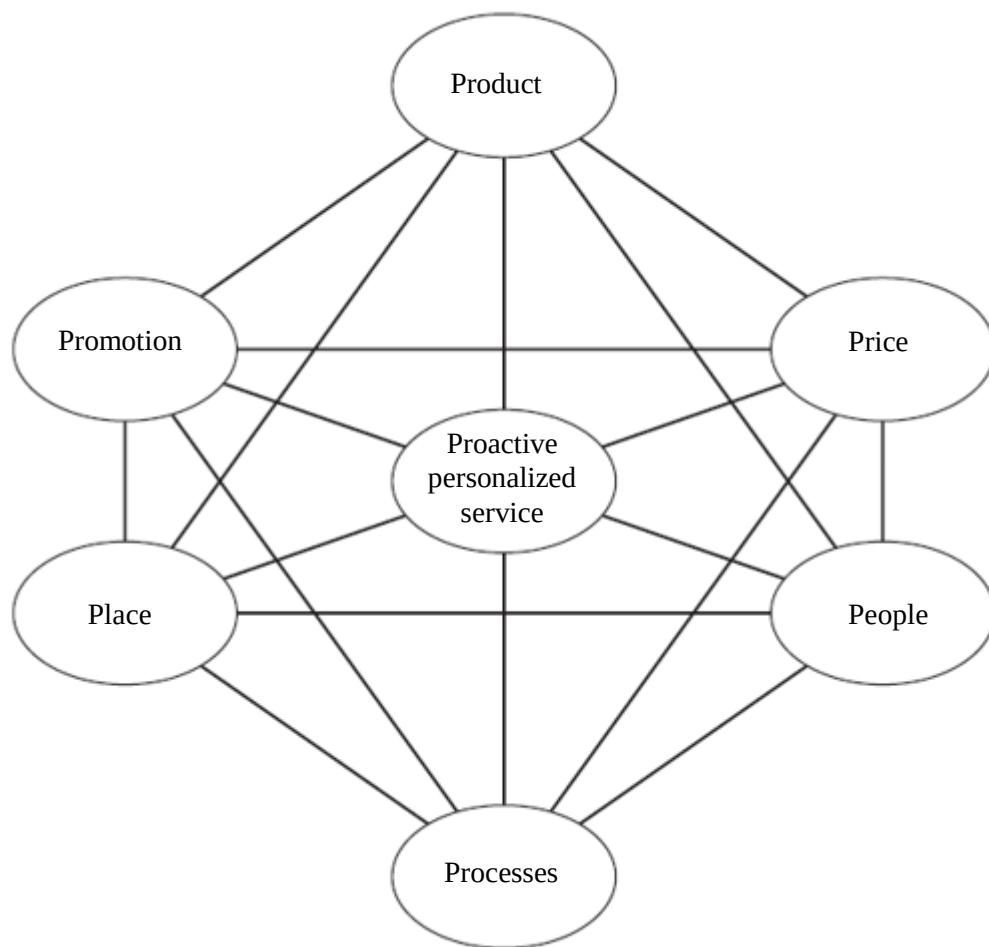
1.1.2. Development of Relationship Marketing

Service marketing began to develop as a distinct marketing area in the early 1970s, with its own concepts and models based on the usual characteristics of services. Following its emergence, marketing experts from diverse schools devised a variety of tactics. While the Nordic School of Services viewed service marketing as inextricably linked to general management (e.g. Grönroos & Gummesson, 1985), North American research into service marketing has remained confined to the marketing mix paradigm, albeit with some innovative outcomes (e.g. Berry, 1983) (Grönroos, 1994). Although

relationship marketing is not a new marketing strategy, Berry was the first to recognize it in 1983. At the time of the emergence of concept, the market was characterized by major changes due to factors such as the emergence of new technologies and their impact on the development of products and services, increased competition, market maturation, reduced population growth rate (Ciobanu & Luca, 2016).

According to Peck et al. (1999), the growing relationship marketing concept is built on the premise that customers and consumers will remain loyal to a certain source of supply as long as they believe they are receiving greater value. It should be noted that while the traditional marketing mix elements (4Ps) remain vital, they must be augmented by factors that provide value to the customer and consumer (Figure 2).

Figure 2: The Seven Ps of Marketing Mix



Source: Peck et al., 1999: 411.

They identified three other distinct factors that have a significant impact on customer and consumer value: people, processes, and proactive personalized service. Attracting, educating, and motivating employee who share the business's values and represent them at every point of customer and consumer encounter is now a priority. Processes may be described as a method of conducting business that entails a sequence of interrelated operations designed to satisfy customer requirements. The key to exceeding customer expectations is proactive/personalized service (Peck et al., 1999: 408). The enhanced marketing mix's seven components are depicted in Figure 2.

The marketing mix is a collection of categories of marketing factors, and to begin, this approach of describing or explaining phenomena may never be considered very valid. A list will never contain all pertinent elements, will not fit in all circumstances, and will expire (Grönroos, 1994: 348). Relationship marketing is an alternative marketing approach to traditional marketing mix management. In this approach, relationships that create context for business are managed. All interactions inside the trading relationship management (TRM) system occur in preparation for or during the execution of trade transactions. The following table 1 presents two distinct approaches to defining the role and function of marketing management. While marketing mix management is concerned with controlling awareness and preference trends via the dissemination of supplier and product information, relationship marketing is concerned with developing individualized ties through strong personal appeal and sustained commitment. (Varey, 2002: 17).

Gummesson (1994) defined relationship marketing as a marketing approach in which the management of interactions, relationships, and networks are central concerns. Interactions are not necessitated to be initiated by the seller (marketer according to the marketing mix paradigm) and may continue for an extended period of time, such as several years (Grönroos, 1994). The advent of relationship marketing was intrinsically tied to the expansion of the service industry, which was characterized by long-term customer relationships, an emphasis on customer-firm interaction, and customer participation in service outcomes. Relationship marketing grew along with the service industry, which emphasized long-term customer relationships, customer-firm interaction, and customer engagement in service outcomes (Gummerus et al., 2017).

Table 1: Comparison of Marketing Mix Management and TRM

Marketing mix management	Trading relationship management
• Recruit customers	• Strengthen customer relationships
• 4Ps model	• Economics and social psychology of trading relationships
• Managerialistic use of the 4P toolbox of controllable variables	• Marketing as a social system and marketing relationship as a process
• Production orientation	• Customer orientation
• ‘Do to’	• ‘Do for– do with’
• Departmentalized function	• Customer relationship life cycle model
• Marketing as a technology	• Co-production of valued service: interactive marketing function, perceived service quality
• Active seller, passive buyer/consumer	• Active participants
• Promotional budget overhead	• Relationship learning reduces interaction costs

Source: Varey, 2002: 18.

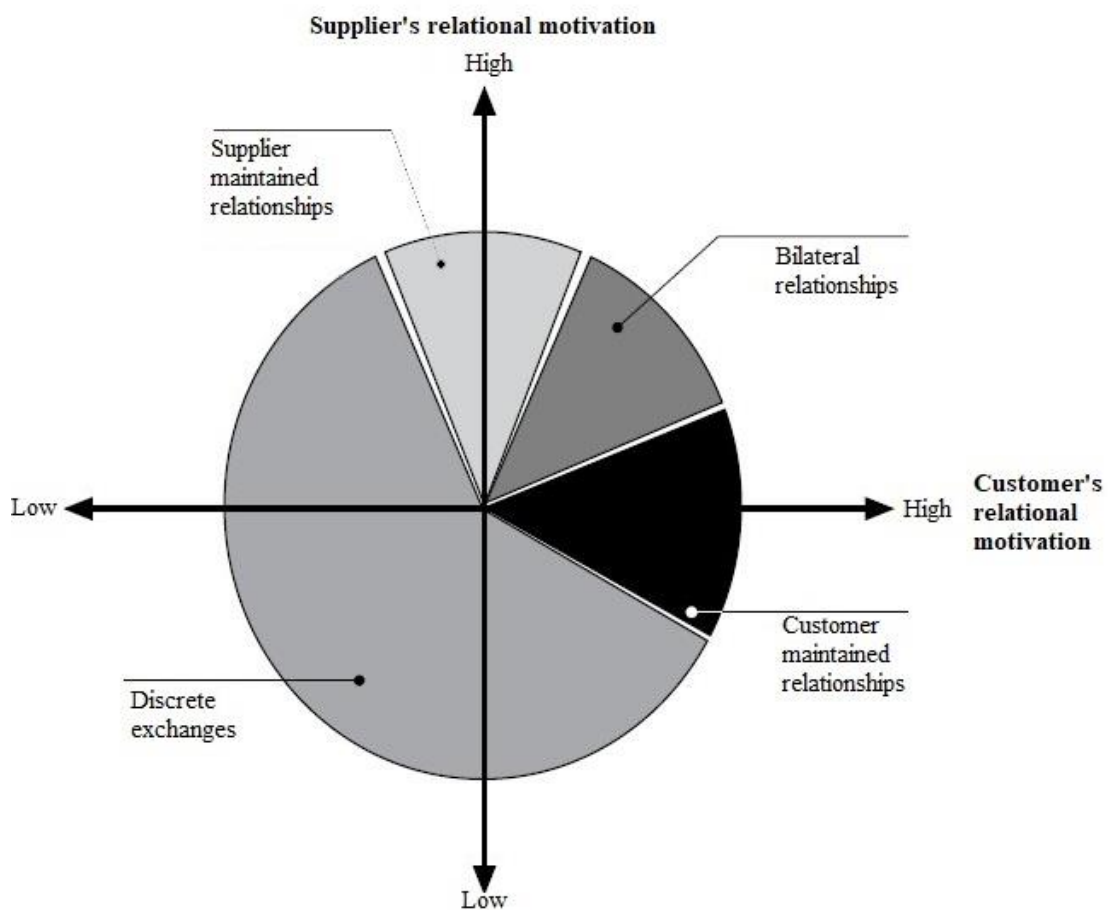
1.1.3. Benefits of Relationship Marketing

Examining the relationship marketing literature has shown us that the long-term relationship has common or unique benefits for the parties. The importance of developing and maintaining permanent relationships with customers is frequently emphasized in relationship marketing literature and most of the authors concluded that organizations can benefit from long-term relationships (e.g. Davis & Mentzer, 2006; Grönroos, 1991; Voss & Giraud Voss, 1997). There have been also few empirical studies that have investigated the motivations and benefits that customers gain from maintaining a long-term relationship with a specific service provider (Molina et al., 2007). For this reason, it would be appropriate to evaluate the benefits of relationship marketing to the parties separately for the business and the customer.

In supplier-customer relationships, there are various motivations that affect the commitment of both parties to the relationship. The benefits parties derive from the relationship are an important output that determines the level of these motivations and the guiding force of the relationship. Voss and Giraud Voss (1997) conceptualized relational motivation of both buyer (i.e. customer) and seller (i.e. supplier) based on Dwyer's study (Dwyer et al., 1987) (Figure 3). In the model, both suppliers and

customers have varying levels of motivation to invest in a relationship, depending on the anticipated net relationship benefits. A customers' market with distinct exchanges occurs when suppliers are encouraged to invest in a relationship, but customers are not. As an alternative, if customers want to invest in a relationship but suppliers do not, the market for providers with separate exchanges will emerge. It is possible to establish a connection that is both bilateral and theoretically symmetrical when both customers and suppliers have a strong desire to invest in it. Finally, when customers (suppliers) are moderately motivated to invest in a relationship and suppliers (customers) are highly motivated, an asymmetrical supplier- (customer-) maintained relationship emerges.

Figure 3: The Conceptual Model of Relational Motivation



Source: Adapted from Voss and Giraud Voss, 1997: 280.

1.1.3.1. Benefits of Relationship Marketing to Customers

Relationship marketing in supplier-customer relationships, above all, has a positive effect on customers' own value chain. To offer competitive value to customers, every organization must have a clear awareness of its customers' needs and the activities that define their value chain (Ravald & Grönroos, 1996b: 23). Relationship marketing seeks to develop close relationships with customers in order to better understand their needs and to have a positive impact on their value chain by investigating and improving the value they receive.

A service business's customers anticipate to obtain satisfactory delivery of the core service after they have established a relationship with the firm. Customers, on the other hand, are likely to obtain additional benefits in addition to the core service performance as a result of developing long-term relationship with a service provider. According to (Gwinner et al., 1998), customers that maintain long-term relationship with service organizations gain from three basic categories of benefits: confidence, social, and special treatment. Sheth and Parvatiyar (1995) claim customers prefer fewer options. Long-term relationships may reduce choice by boosting confidence. (Berry, 1995) claims that reducing risk is one of the most important outcomes of service provider relationships. Morgan and Hunt (1994) contend that trust, defined as confidence in the trustworthiness and integrity of the exchange partner, is a critical mediating variable in relational exchanges.

According to the literature, customers benefit socially from long-term partnerships with service providers (Czepiel, 1990; Gwinner et al., 1998). The social benefits that have been assumed include having a sense of familiarity, receiving personal acknowledgment, making friends, establishing rapport, and getting social support (Barnes, 1994; Berry, 1995). Due to their relationship customer status, customers may receive special treatment in the form of price discounts (economical), faster service (economical), or special added services (customization) (Gwinner et al., 1998: 109).

There are a number of additional benefits to developing a long-term relationship with a service provider. Customers that enter into long-term business relationships with service providers have the opportunity to improve the overall quality

of the services they receive (Halinen, 1997). One of the common benefits of relationship marketing for all parties is its positive impact on financial performance. As Palmatier et al. (2007) pointed out that successful inter-organizational relationships are critical to the financial performance of firms, as most firms must leverage the capabilities and resources of other organizations to compete effectively.

1.1.3.2. Benefits of Relationship Marketing to Business

Voss and Giraud Voss (1997: 278) stated that relationship marketing practices provide the following benefits to companies; higher barriers to customer switching, decreased customer price sensitivity and economies in the form of lower marketing costs. A long-term business relationship might assist the service provider in marketing by creating referrals and credentials, or it can create a competitive advantage by preventing provider switching (Halinen, 1997).

Customer-oriented relationship marketing practices positively affect customer loyalty. Loyal customers mean reduced retention costs and increased profitability as a result of lower defection rates. The benefits of relationship marketing and customer relationship management (CRM) are realized through decreased retention costs and improved profitability as a result of lower defection rates (Reichheld & Sasser, 1990). Maintaining and expanding an existing customer relationship is generally less expensive for a service company than gaining a new one, as Berry (1983) points out. The effect of relationship marketing on the profitability of businesses has been extensively researched. Loyalty, which is the most important customer-oriented output of relationship marketing practices, is one of the primary stages of relationship marketing and many studies have focused on this concept from a theoretical and empirical approach, especially in relation to profitability (Molina et al., 2007). Relationship marketing efforts, in particular, have been demonstrated to increase revenues of loyal customers, enhance their chance of acquiring extra goods and services, and affect customer' propensity for positive word-of-mouth (Kinard & Capella, 2006). Positive word of mouth is a behavior acquired by loyal customers. Positive word of mouth benefits businesses significantly by influencing future

purchasing decisions and attracting new consumers, especially when the service being supplied involves a high level of risk for the customer (Molina et al., 2007: 257).

1.2. THEORETICAL BACKGROUND OF RELATIONSHIP MARKETING

Relationship marketing has been defined by Gummesson (2002a: 39) who looked at it from a managerial and social perspective;

Total relationship marketing is marketing based on relationships, networks and interaction, recognizing that marketing is embedded in the total management of the networks of the selling organization, the market and society. It is directed to long term win-win relationships with individual customers, and value is jointly created between the parties involved. It transcends the boundaries between specialist functions and disciplines.

As it can be understood from the definition, relationship marketing covers not only the relationship between the supplier and the customer, but also an interaction network that includes all relevant parties. While establishing long-term relationships with individual customers, the business should also organize relational exchanges with the parties in its supply chain. Businesses should consider that the parties with which it makes a relational exchange also have an effect on the value offered to the customer. Most of the theories affecting relationship marketing have focused on the interaction and exchange between parties.

Services marketing and the network approach to business-to-business are two critical areas that have resulted in the creation of more radical theories in the fields of relationship marketing. Gummesson (2002) asserts that connections, networks, and interaction have a little part in traditional marketing management, often known as the marketing mix or the 4Ps (product, price, promotion, and place). Types of products (goods or services) and relationships can be used to categorize marketing (consumer or organization). Figure 4 shows how the theories match marketing circumstances. The classification might be used to emphasize a given perspective rather than as mutually excluding categories.

Although the marketing mix approach to traditional marketing has dominance over marketing education worldwide, it is most closely associated with mass marketing of standardized consumer products. Relationships are frequently confined to the engagement of a salesman with a buyer or to negotiations between sales management

and negotiation teams. However, beginning in the 1970s, a series of models of organizational buying behavior for B2B emerged that demonstrate a more complicated, somewhat network-like approach of marketing. The RM/CRM root system places a premium on services marketing, B2B as networks, and traditional marketing management. These roots have been extended through the service dominant logic (S-D logic) and many-to-many marketing (Gummesson, 2008: 16-17).

Figure 4: The Domains of Marketing Theories Contributing to Total Relationship Marketing

Relationships Products	To consumers B:C	To organizations B:B
Goods	Marketing management/mix/4Ps	Network theory
Services	Services marketing and service management	

Source: Gummesson, 2002: 42.

S-D logic: In S-D logic, two types of resources are distinguished: operand resources and operant resources. While operand resources are often static and tangible, operant resources are embedded knowledge and abilities (Vargo & Lusch, 2004). If marketing is viewed from the perspective of a service-oriented logic, relationship marketing is a strategic level of marketing that focuses on identifying, developing, and maintaining a portfolio of relationships (Madhavaram & Hunt, 2008). Through the controlled relationship portfolio, the relationship marketing strategy may provide a competitive advantage for the firm, and effective management of this relationship portfolio entails the development of the company's market-related competence (Catoiu & Tichindelean, 2012: 657). Day and Montgomery (1999) defines this competence as

an interconnecting operant resource that aims to establish and maintain a company's relationships with its customers through:

(1) The company's relationship orientation via the incorporation of its values and norms.

(2) A thorough understanding of its customers and the application of this knowledge inside the organization.

(3) Integration of internal business processes and alignment of external business processes with those of the company's customers.

Network theory: The network theory was used by IMP Group (Industrial Marketing Purchasing Group) to conceptualize relationship marketing. This theory assumes that markets, from the perspectives of its elements, are heterogeneous and not homogeneous; and these organizations are not independent entities, but they are part of a network. Both sellers and buyers can be members of this network; therefore, there is the possibility of initiating commercial relationships with other network members in any desired moment of business activity (Catoiu & Tichindelean, 2012: 655). Network theory is a very useful theory in describing the relationships between liner shipping parties. Due to its technological and economic characteristics, the liner shipping sector might be classified as a network business. Additionally, specific liner firms may be identified by the sub-networks they establish on trade lanes and ports of call. The prevalence of cooperation agreements, particularly worldwide strategic alliances, and the incidence of mergers have been understood in this context as a desire to increase the degree of interconnection among individual liner networks (Bergantino & Veenstra, 2002).

Institutional theory: Institutional theory is a dynamic, alternative, multi-constituent approach that views social actors as allies of the company when institutional standards are adhered to. After that, the institution is regarded legitimate (Varey, 2002: 31). This theory proposes that “the social contexts in which firms operate impacts the behavior in and of organizations (Meyer & Rowan, 1977), leading firms in an industry to adopt similar structures and practices” (Hillebrand et al., 2011: 593). Relationship marketing is institutionally relevant because its techniques advocate for a certain type of exchange; “interactions between suppliers and customers should be personal and collaborative, rather than transactional”. As a result, when

relationship marketing is institutionalized, it increases the likelihood of intimate supplier-buyer ties over 'arm's length' relationships (McNally & Griffin, 2005).

Exchange Theory: Exchange theory is largely concerned with the direct exchange of tangible goods between two people. Bagozzi (1975) argues that marketing transactions are frequently indirect, may entail intangible and symbolic elements, and may involve more than two people. According to him, marketing theory is concerned with two issues:

(1) What motivates individuals and organizations to form exchange relationships?

(2) The process through which exchanges are initiated, concluded, or avoided. He distinguishes three distinct modes of exchange: restricted, generalized, and complicated.

Social Exchange Theory: Marriage, bargaining, and power theory all have a part in the development of social exchange theory (Varey, 2002). Dwyer et al. (1987) developed a paradigm for buyer–seller relationships by integrating relational contract theory and social exchange theory. They argue that relational exchanges exist on a continuum with discrete transactions. Additionally, they imply a variety of relational constructs, including trust, commitment, norms, dependency, justice, conflict, cooperation, and communication. In the framework of social exchange theory, a number of researchers (e.g. Bucklin & Sengupta, 1993; Hibbard et al., 2001) argue that knowing the interdependent structure of the exchange is critical for comprehending the performance of interorganizational relationships. Interdependence, according to Grawe et al. (2012), influences one partner's potential to influence the other, and partners' interdependence is often assumed to effect performance (i.e., positively because interdependent partners work to maintain their relationship and avoid destructive actions).

Power and Dependence Theory: This theory has its origins in social exchange theory and has been refined in sociology. It emphasizes the importance of power and reliance among channel partners in analyzing exchange relationships and performance. When a channel member owns the resources that other channel members desire or require, they get the authority to convey the behavioral and economic consequences of change to other members (Emerson, 1962).

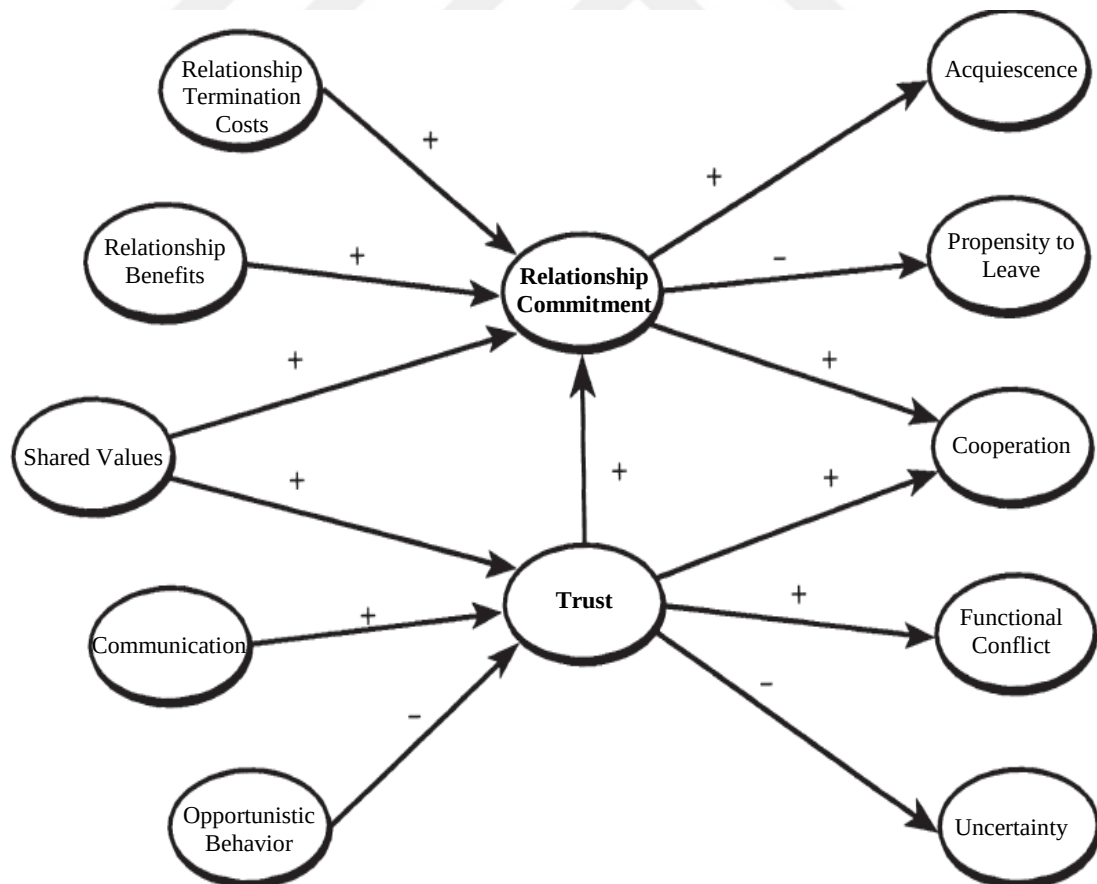
Relational Contracting Theory: The idea of relational contracting is essentially based on contract law, which governs the legal rights of exchange partners and directs the design and conduct of exchange. While traditional contract law saw exchange as a series of isolated, static transactions, current contract law attempts to account for the dynamic character of intermediate and long-term exchanges (Varey, 2002: 25). Relational contract theory views contracts as methods for shaping relationships. Campbell (2004) asserts that the greatest distinguishing feature of relational contract theory is its social-philosophical foundation. Contracts are, from a relational viewpoint, a method of organizing collaboration and hence the vehicles through which economic players seek to accomplish their goals. The distinguishing aspect of contracts in this case is not an isolated option, but the commitment made by the parties to a transaction agreement. Macneil (1981: 4) defines contract as "the relationship between parties to the process of projecting exchange into the future." Contracts, according to relational contracting theory, are based on the promises of contracting parties, but neoclassical economics or classical contract law see the contract as the 'presentation' of the resource valuation established in the transaction (Ehret & Haase, 2012: 451).

Transaction Cost Theory (TCT): TCT draws on ideas from microeconomics and institutional economics, contract law, and organizational theory. This approach categorizes transactions as occurring within a business or between firms in a market. (Varey, 2002: 24). According to transaction cost theory, relationship governance may fulfill many of the same roles as vertical integration in terms of suppressing opportunistic behavior, lowering transaction costs (e.g., safeguarding and monitoring expenses), and encouraging performance-enhancing investments (Palmatier, 2008: 13). It assumes that a firm will internalize activities that can be carried out at low cost and rely on market mechanisms for activities that other providers have advantage (e.g. outsourcing) (Varey, 2002). Transaction cost theory demonstrates that transactions incur extra expenses in addition to the payment of market pricing for a product or service. Firms should consider these expenses in addition to market pricing when making purchase decisions. Establishing commercial relationships amongst organizations is one way to offset these expenses (Heide, 1994).

TCT is primarily concerned with creating conditions that induce exchange partners to organize their interactions in a specific way, without detailing the mechanisms that enable these desired structures to be implemented. It focuses on a particular connection arrangement at a particular point in time. As a result, it overlooks the dynamic growth of a governance system and its transactions (Varey, 2002: 25).

Commitment-trust theory: Morgan & Hunt, (1994) established the key mediating roles of commitment and trust in buyer–supplier relationships (figure 5) by examining the relationship between a set of antecedent constructs (i.e., relationship termination costs, relationship benefits, shared values, communication, and opportunistic behavior) and five critical relationship marketing outcomes (i.e., acquiescence, propensity to leave, cooperation, functional conflict, and decision-making uncertainty).

Figure 5: The Key Mediating Variables Model of Relationship Marketing



Source: Morgan and Hunt, 1994: 22.

Morgan and Hunt (1994) assert that relationship commitment and trust are necessary components of successful relationship marketing. The authors demonstrate the critical role of commitment and trust by encouraging marketers to: (1) work to protect relationship investments through collaboration with exchange partners, (2) resist attractive short-term alternatives in favor of the expected long-term benefits of remaining with existing partners, and (3) view potentially risky actions as prudent due to their belief that their partners will not act opportunistically. As a result, when exchange partners have both commitment and trust, they develop outcomes that encourage efficiency, productivity, and effectiveness. According to Morgan and Hunt (1994), relationship commitment is defined as an exchange partner believing that an ongoing relationship with another is so critical that it warrants maximum effort to maintain, and the committed party believing the relationship is worth working on to ensure its indefinite continuation. They define trust as the degree to which one side has confidence in the reliability and integrity of an exchange partner.

Resource-based view (RBV): The resource-based view (RBV) asserts that the accumulation of valuable, rare, inimitable, and nonsubstitutable resources serves as the foundation for company competitiveness and economic rent (Lin & Wu, 2014). According to the RBV, firms with those resources have the potential of achieving superior performance. Competitive advantages can be gained from a variety of resources, including tangible ones like assets and property and intangible ones like capabilities, organizational processes, information, and knowledge (Chou et al., 2018). Businesses cannot be expected to master all of these resources. Based on the principle of co-creating value together, resources can be used effectively and efficiently together with the other parties of the relationship. A business's capacity to compete is dependent not just on its internal strategic assets, but also on the type and extent of partnerships it can develop with other businesses. Often, the nature of competition precludes a corporation from controlling all of the resources and competencies necessary to compete (Vázquez et al., 2005: 125).

Social network theory: A social network is composed of a finite number of actors who are connected by a predefined set of relations. The purpose of network theory is to describe the impact of various structural properties on actors (Badi et al.,

2017: 207). Terminology that used in social-network theory briefly introduced in Table 2 below.

Organizational studies can benefit from social exchange theory, even though it was originally developed for interpersonal relationships. The social exchange theory's explanatory variables (individual traits, situational limits, and process-related factors) must, however, be adapted to the object of study when an organization or a firm is the research unit (Eiriz & Wilson, 2006).

Table 2: Basic Social Network Analysis Concepts

Concept	Definition
<i>Actors</i>	The social entities linked together according to some relation.
<i>Alters</i>	The actors to whom an ego is tied.
<i>Centrality</i>	A family of measures characterizing the prominence of an actor in the social network. Central actors are those that are extensively involved in relationships with other actors.
<i>Cliques</i>	A fully connected group or network.
<i>Density</i>	A measure of the proportion of all possible ties that are actually present in the network and is an indicator of 'cohesion' and 'connectivity' and the speed at which information diffuses in the social network
<i>Dyad</i>	Consists of a pair of actors and the relations between them. The dyad is frequently the basic unit for the statistical analysis of social networks.
<i>Ego</i>	The focal actor of interest.
<i>Ego-network</i>	Social network of a particularly focal actor, ego, ego's alters, and the ties linking ego to alters and alters to alters.
<i>Relation</i>	A specified set of ties among a set of actors, e.g. friendship, family, etc.
<i>Social Network</i>	A set of relations that applies to a set of social entities and any additional information on those actors and relations.
<i>Tie</i>	What connects A to B, e.g. A is friend with B = A is tied to B.
<i>Triad</i>	A subset of three actors and the relations among them.

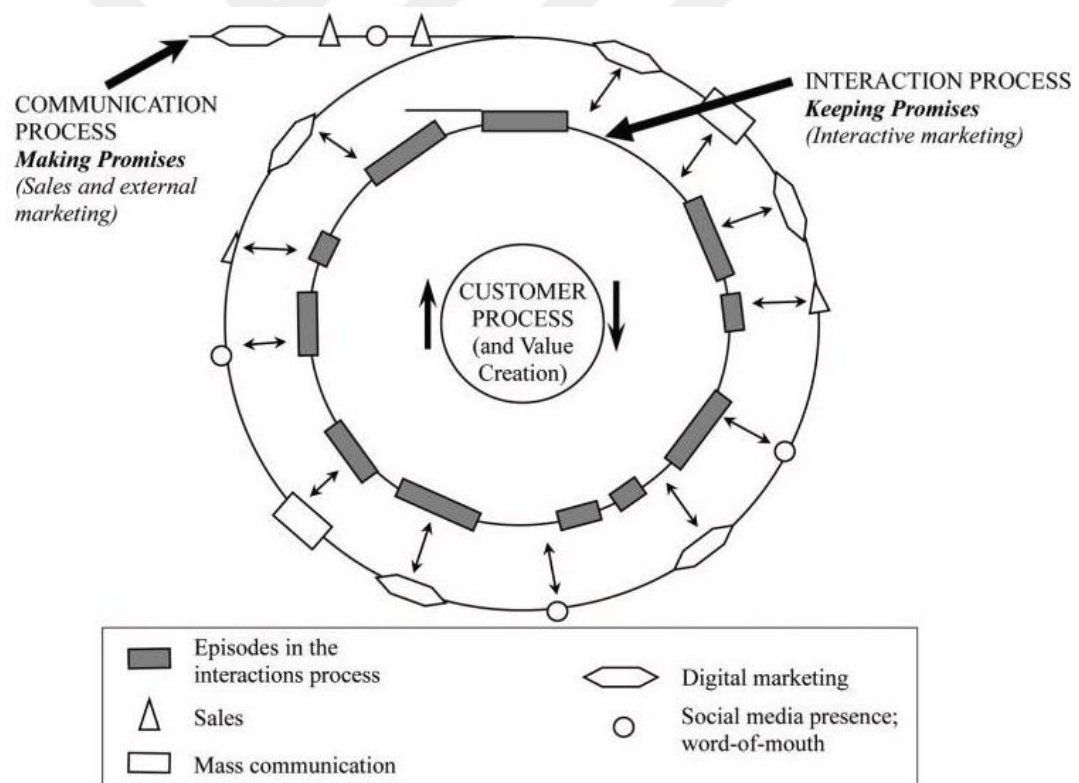
Source: Badi et al., 2017: 207.

Promise Theory: According to promise theory, marketing is founded on both the exchange and fulfillment of promises, and the interplay between promise making and promise keeping is important to effective marketing (Grönroos, 2017: 218). Grönroos (2015) suggested a relationship marketing model (Figure 6) that consists of three processes, denoted by three circles in the illustration. The innermost circle shows

the customers' value creation process, which includes a collection of routine tasks. Two parallel marketing processes are represented by the two outer rings. The double-sided arrows connecting these two processes suggest that they must work cooperatively.

In service market, how promises are fulfilled is critical to successful marketing. Grönroos (2016: 281) highlights the fulfilment of promises and explain the purpose of RM as “to identify and establish, maintain and enhance, and when necessary terminate relationships with customers (and other parties) so that the objectives regarding economic and other variables of all parties are met. This is achieved through a mutual making and fulfilment of promises”.

Figure 6: A Relationship Marketing Model



Source: Grönroos, 2015.

Grönroos (2017) states that “products and tangible resources are part of what is offered to a customer, but the relationship may include much more, such as

deliveries, information, personal contacts, invoices, installing and maintenance, complaints and recovery, navigating websites and a host of other possible elements”.

Resource Dependence Theory: Numerous theorists believe that dependence and power are necessary components of describing organizational and interpersonal behavior. However, classic marketing discussions of exchange frequently overlook variations in negotiation power and the resulting uneven and unpleasant character of exchange transactions. By addressing the origins of power and dependency in exchange relationships, resource dependence theory clearly tackles these challenges (Varey, 2002). According to the RDT viewpoint on interorganizational relationships, creating collaborative interorganizational interactions is one strategy for acquiring resources and reducing uncertainty and dependence (Pfeffer & Salancik, 1978). According to RDT, a greater degree of dependence frequently results in a deeper interorganizational relationship in order to manage the resulting dependence (Chu & Wang, 2012: 81).

1.3. COMPARISON OF TRANSACTIONAL MARKETING AND RELATIONSHIP MARKETING

Historically, marketing has been focused on customer acquisition, with an emphasis on the value of individual selling. This transactional method is gradually being supplanted by a relationship marketing approach that places a premium on long-term connections and repeat purchases (Peck et al., 1999: 44). One of the earlier definitions of marketing by the American Marketing Association (AMA) best describes the transactional marketing view: “marketing is the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives”.

The transactional marketing model (as with the 4Ps) is predicated on three assumptions: a vast number of potential consumers; customers and their wants are relatively homogeneous; and it is relatively easy to replace lost customers with new ones (Hollensen, 2015: 9). A new marketing approach/strategy has arisen in recognition of the fact that customer retention boosts business profitability and competitiveness.

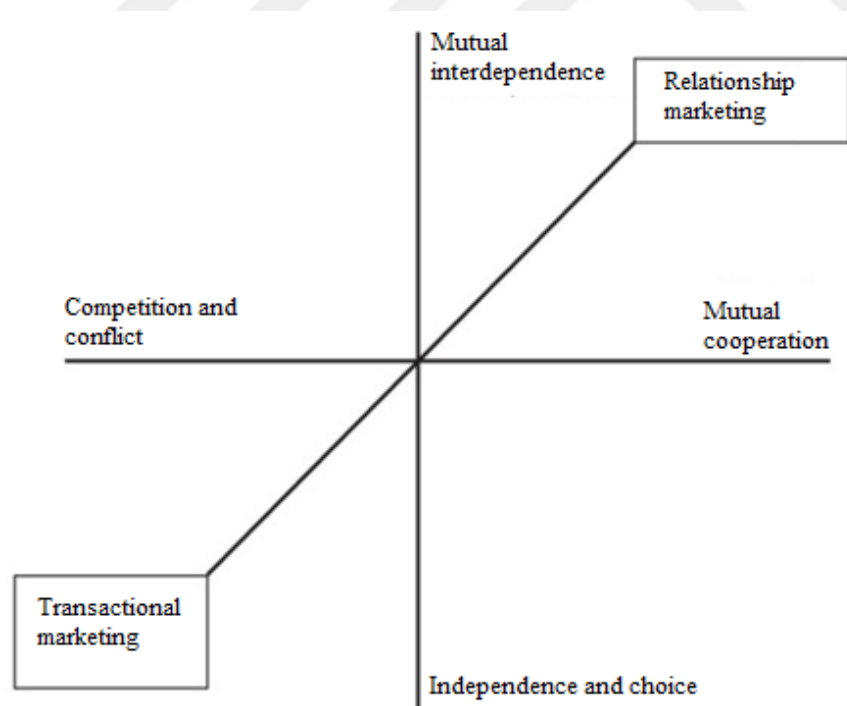
Table 3: The Comparison of Transactional Marketing and Relationship Marketing

Category	Transactional marketing	Relationship marketing
Focus	Economic transaction. Decision focus on product/ brand and 4Ps.	Decision focus on relationships between firms in a network and individuals.
The marketing environment	Marketing rules are very clear, defined and constant. Market is bound by countries and regions.	Marketing rules are relatively clear, defined and constant. Market is relatively bound by network and alliances. The boundaries between firms are blurred, if not completely eroded.
Parties involved	A firm and buyers are involved in a general market. Distant and impersonal contact.	Dyadic relationships: sellers, buyers and other firms. Face-to-face, close interpersonal contacts based on commitment and trust.
Goals	Each party's goals and objectives, while similar, are geared to what is best for them.	Shared goals and objectives ensure common direction.
Managerial intent	Transaction/sales volume and creating new customers are considered a success. customer attraction (to satisfy the customer at a profit).	Keeping the existing customers, retention, is considered to be a success. Satisfy the customer, increase profit and attain other objectives, such as increased loyalty, decreased customer risk, etc.
Production focus	Mass production	Mass customization
Communication	Communications structured and guarded.	Open communication avoids misdirection and bolsters effective working relationships.
Customers	Low customer interactivity. Customers are less knowledgeable and informed.	High customer interactivity. Customers are aware and informed. Their feedback can be immediate.
Competitive advantage/ differentiation	The quality of the product is important for differentiation. The marketing mix can be used for the differentiation.	Creativity is important for differentiation. Long-term and close relationships, adaptation and putting the customer at the centre of the organization are a source of differentiation.
Balance of power/ sharing	Active seller – less passive buyers. Suspicion and distrust. Each party wary of the motives and actions of the other. Sharing limited by lack of trust and different objectives. Often opportunistic behavior.	Seller and buyer mutually active and adaptive (interdependent and reciprocal). Mutual trust forms the basis for strong working relationships. Sharing of business plans and strategies.
Organization/ managerial level	Functional marketers (e.g. sales manager, product development manager). Marketing is a concern of the marketing department.	Managers from across functions and levels in the firm. Everyone in the organization is a part-time marketer. Specialist marketers (e.g. key account managers).
Formality	Formal (yet personalized via technology).	Formal and informal (i.e. at both a business and social level).
Duration	Discrete (yet perhaps over time). Short-term.	Continuous (ongoing and mutually adaptive, may be short- or long-term).
General advantages/ disadvantages	Advantage: independence of buyer and seller. Disadvantage: the firm is in a vulnerable situation if a competitor makes a better offer to the customer.	Advantage: intimate knowledge of needs and markets (developed over time), which has been likened to reading the minds of customers. Disadvantage: the firm is in a vulnerable situation if its business supplier (customer) disappears.

Source: Hollensen, 2015: 12.

Ravald and Grönroos (1996) described this new concept as; “the core of relationship marketing is relations, a maintenance of relations between the company and the actors in its micro-environment. The idea is first and foremost to create customer loyalty so that a stable, mutually profitable and long-term relationship is enhanced”. Table 3 shows the comparison of transactional marketing and relationship marketing. An integrative relationship suggests that the interacting parties' intentions and processes overlap and that they have strong economic, emotional, and structural ties. It represents interdependence rather than electoral independence among parties, and promotes cooperation rather than competition and resulting conflict among marketing agents. As depicted in Figure 7, the emergence of relationship marketing represents a dramatic shift in marketing axioms: from rivalry and conflict to inter-cooperation, and from independence of choice to interdependence (Sheth & Parvatiyar, 1995).

Figure 7: Axioms of Transactional Marketing and Relationship Marketing



Source: Sheth & Parvatiyar, 1995: 400.

1.4. CUSTOMER VALUE IN RELATIONSHIP MARKETING

Value is customer-specific and is mostly subjective to the customer in the marketing context. Essentially, it shows the perceived benefits that customers believe they gain from the ownership or consumption of a product or service based on the 'total cost of ownership'. Payne et al. (1999) defines customer value as the impact of the supplier's offer on the customer's own value chain. Customers will see a clear increase in value if this offer results in enhanced performance, higher perceived advantages, or lower costs for them as a result of this offer. So, any relationship marketing program should start with a precise definition and specification of the value to be offered, the market segment by market segment, and even the customer by customer. In short saying, this is value proposition or "how to intend to create value for customers (Peck et al., 1999: 421). To manage value creation in a relational context, the supplier must concentrate on resources - personnel, technologies, information and knowledge, the customer's time, and the customer himself - and their ability to acquire and manage them (Grönroos, 1997: 417).

Various researchers consider value and value exchanges to be the basis of relationship marketing (Ballantyne et al., 2003; Grönroos 1997; Ravald and Grönroos 1996; Sanzo and Vazques, 2011). Focusing on customer value developed as a key concept in marketing in the 1990s. The ability of a supplier to give higher value to its customers is regarded one of the most successful techniques of the 1990s when it comes to relationship marketing (Grönroos, 1997: 411). A collaborative relationship's *raison d'être* is value creation and value sharing (Anderson, 1995). Interactions between suppliers and customers have as their goal the creation and distribution of value (Camarero Izquierdo et al., 2005: 234).

Businesses must manage their value chain and the entire value delivery system in a customer-centric manner in order to maximize customer satisfaction, as the company's goal is not only to acquire customers, but also to retain them. Customer-centric relationship marketing is critical for customer retention, as it entails offering financial and social benefits to customers in addition to structural relationships (D. Kumar, 2014: 1047).

1.5. RELATIONSHIP MARKETING STRATEGIES IN SERVICE INDUSTRY

Relationship marketing programs' primary purpose is to develop and maintain unique relationships with customers that cannot be replicated by competitors. Therefore, businesses that successfully implement relationship marketing strategies gain sustainable competitive advantages. There are several relationship marketing strategies that managers should consider when developing a relationship marketing program (Berry, 2002). In fact, relationship marketing itself is a marketing strategy designed to foster customer loyalty, interaction and long-term engagement. Therefore, every marketing strategy aimed at establishing close relationships with customers can also be considered as a relationship marketing strategy. Numerous relationship marketing tactics should be explored while creating a relationship marketing program. In fact, relationship marketing itself is a marketing strategy designed to foster customer loyalty, interaction and long-term engagement. This marketing strategy is more concerned with long-term customer retention than with gaining a large number of new, possibly one-time customers (Kumar, 2014).

Berry makes the first attempt to propose relationship marketing strategies in 1983. To achieve long-term customer loyalty, he recommended the following five relationship marketing strategies: core service strategy, service augmentation, relationship customization, relationship pricing, and internal marketing. Berry (1995) then offered three application levels for relationship marketing based on the type of bond produced by the relationship (Table 4); financial bond, social bond, and structural bond. Level one marketing methods include financial marketing techniques (price incentives to ensure customer loyalty). Relationship marketing at the second level is concerned with social relationships and tries to establish social linkages between parties. Given that many service encounters are also social encounters, it's evident how critical these activities are to the relationship's continuation. Relationship marketing at the third level is based on the concept of developing a more formal.

Chaston (1998) and Chaston et al. (2000) focused on customer needs and problem solving while proposing the relationship marketing strategies scale. Their scale includes the following six items: repeat sales by developing long-term close relationships, in-depth understanding of customer needs, new and improved products,

tailored quality standards to meet the needs of individual customers, staff strongly committed to meet the needs of those inside and outside the organization, and interaction of staff at all levels with the customer to solve identified problems.

Table 4: Three Levels of Relationship Marketing

Level	Primary Bond	Degree of Service Customization	Potential for Sustained Competitive Advantage
One	Financial	Low	Low
Two	Social	Medium	Medium
Three	Structural	Medium to High	High

Source: Berry, 1995: 240.

Caliskan (2019) adapted Berry's three level RM tactics to logistics services. She investigated which type of personality trait has an effect on which type of relationship marketing practice. Table 5 presents the scale of RM practices in the context of logistics industry.

Table 5: Relationship Marketing Practices

Financial RM	Social RM	Structural RM
Discount Payment easiness (e.g. deferred payment) Additional service for free	Preferential treatment Social interaction (e.g. meals) Personal warmth Regular, open, two-way communication	On location service Investing Privilege contract Customizing the service

Source: Caliskan, 2019:19.

Camarero Izquierdo et al. (2005) conducted a research to reveal impact of relationship marketing strategies on the market and economic performance of the businesses in the service industry. They proposed two relationship marketing programs; attraction activities and loyalty and interaction programs. Attraction activities consist of the quality of service (e.g. high service quality, advanced technology) and commercial activities (e.g. broad business hours, a professional layout). Loyalty and interaction programs include the following practices; bonus (e.g.

price reductions, gifts or free services), customer satisfaction (the effort to fit the deadline and to budgets and getting satisfied customer), complaints (the effort to answer and avoid customer's complaints) and contact with customers. Their findings show that the effect of attraction and loyalty programs on market performance is greater than the effect on economic performance. Ndubisi (2012) examined the impact of relationship marketing strategies on relationship quality. By drawing from the mindfulness theory, he investigated the relationship marketing strategy implementation of small healthcare businesses. He proposed three main mindfulness-based relationship marketing strategy; customer orientation (understanding customer needs, response to their requirements, investigating sources of potential service failure and dissatisfaction), communication (timely and reliable information flow to customer and customer information flow to service expert), competence (expertise, professionalism and technical skills of service provider).

Sanzo and Vázquez (2011) investigated the potential influence of firms' customer relationship marketing strategies on the relationship with suppliers from the supply chain context. They classified former relationship marketing dimensions into three groups as follows: enhancing customer loyalty, obtaining personal customer information, and internal capability of service provider to support these two strategies. The first dimension focuses on the firm's perspective on customer relationships and practices that foster customer loyalty, such as keeping promises, providing value-added services, and offering loyalty programs; the second dimension emphasizes the importance of obtaining personalized information about each customer to conduct in-depth customer value and profitability analyses; and the third dimension focuses on the technological (CRM), procedural (service-oriented organization) and human-related capabilities required to implement the previous dimensions. In this research, these three dimensions considered as the main categories of content analysis because they include the dimensions proposed in previous studies and that it deals with the issue from the perspective of business-to-business service, including container transportation.

CHAPTER TWO

MARITIME LOGISTICS SERVICE WITHIN THE BUSINESS-TO-BUSINESS SERVICE MARKET CONTEXT

This chapter examines the literature to understand the structure of maritime logistics industry and services provided by maritime operators from the view of business to business and service market approach.

This chapter proceeds as follows. Section one examines the service characteristics of business to business markets and service relations between partners of business to business market. Second section presents structure of maritime logistics industry and gives definition, key activities and process of maritime logistics and explain maritime logistics value concept. Last section gives brief information about major maritime logistics actors.

2.1. BUSINESS-TO-BUSINESS SERVICE MARKET

Today, companies and their entrepreneurs connected to the global business network are developed a strategic approach based on logistics focus to carry out their business. This comprises supply chain management activities in both the material/goods and nonmaterial/service industries. Maritime logistics actors are business companies and they have supplier-customer relationships in their dyadic relations. Shippers who are customer side of maritime transport also business companies operating in the export and import sector. Core products of the maritime logistics actors are services such as shipping, forwarding and port/terminal operation. Therefore, maritime logistics market has been dominated by characteristics of both business-to-business and service market.

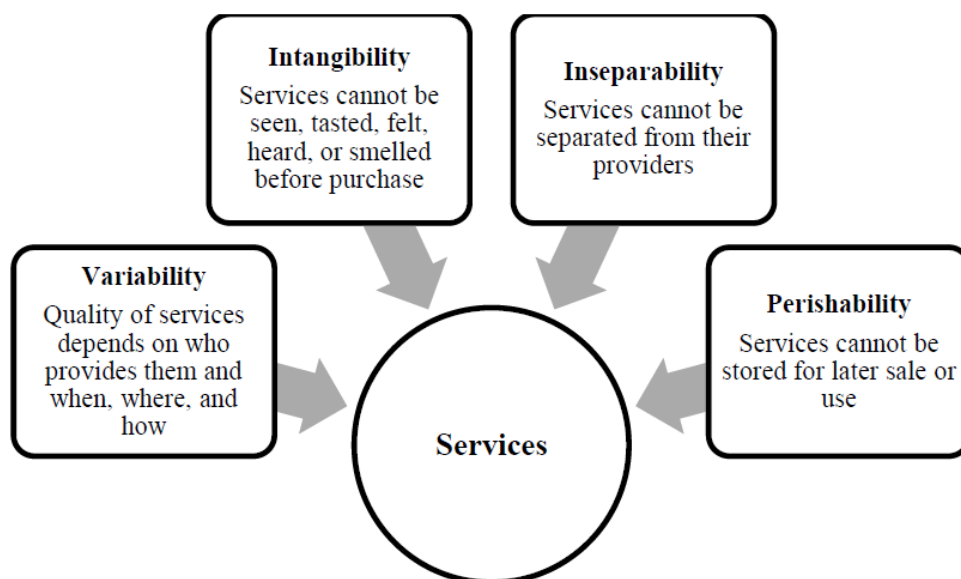
Business-to-business (B2B) and business-to-consumer (B2C) are the two market categories that separated in terms of exchange partner types (Branch, 2008: 1). As defined by Wright (2004), business-to-business marketing refers to the practice in which one firm makes products or services available to another for the latter's own use or the purpose of reselling them to other businesses. B2B marketplaces exist on a national and global scale. B2B market participants can be found in the commercial,

not-for-profit (NFP), and government sectors. In B2B marketplaces, the end customer is the owner or employee of an organization that purchases goods and services for their business. This is the primary distinction between it and B2C marketplaces, in which customers purchase items and services for personal or private use (Wright, 2004: 2).

According to Parasuraman (1998), important tactics for developing in industrial markets have concentrated on determining business customers' product requirements, creating high-quality products that fulfill these requirements, and marketing products at competitive rates. Product-focused studies and publications have also dominated business-to-business marketing literature. However, recent and ongoing changes in the business environment, most notably increased competition and market globalization, as well as more demanding customers, make it harder to compete effectively on the basis of traditional marketing mix elements alone. Given that long-term customer retention is a fundamental goal of relationship marketing, the emphasis is on shifting from serving merely customers to effectively serving them (Parasuraman, 1998: 309).

As Kotler and Armstrong (2013) point out, a company must consider four special service characteristics (intangibility, inseparability, variability, and perishability) when planning marketing programs (Figure 8).

Figure 8: Four Service Characteristics



Source: Kotler and Armstrong, 2013:261.

Services and products differ from the perspective of ownership. There is an exchange of value in the services instead of ownership. Economic activity between two parties are what we mean by the term ‘services’. The market's value exchange between seller and buyer is the focus of these activities. The seller offers ‘solutions’ for potential customers to meet their needs. On the other hand, the buyer wants to get a ‘value’ from the seller in exchange for the money, time and effort spent (Wirtz & Lovelock, 2018: 14). Table 6 summarizes the eight common features of services and make some advice to service industry managers.

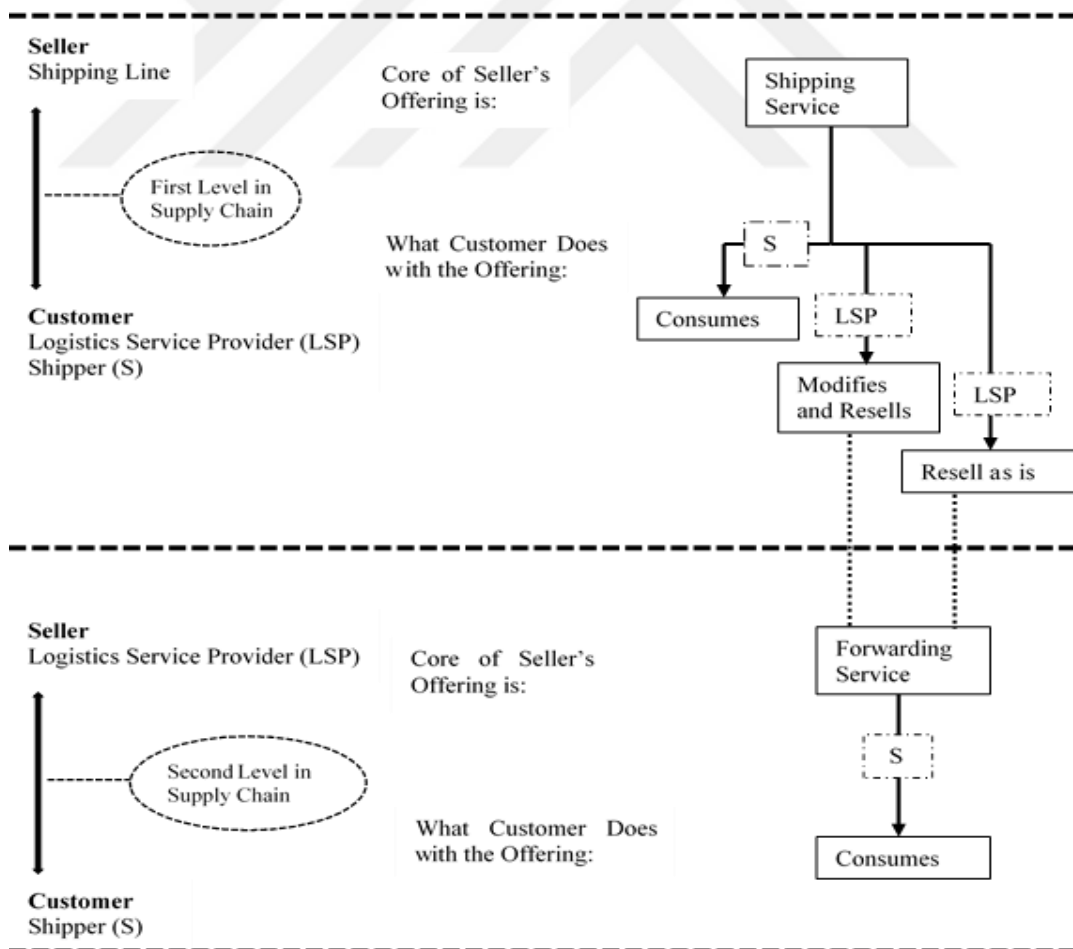
Table 6: Managerial Implications of Eight Common Features of Services

Difference	Implications	Marketing-related Topics
Most service products cannot be inventoried (i.e., output is perishable).	Customers may be turned away or have to wait.	Smooth demand through promotions, dynamic pricing, and reservations. Work with operations to adjust capacity.
Intangible elements usually dominate value creation (i.e., service is physically intangible).	Customers cannot taste, smell, or touch these elements and may not be able to see or hear them. Harder to evaluate service and distinguish from competitors.	Make services tangible through emphasis on physical clues. Employ concrete metaphors and vivid images in advertising, branding.
Services are often difficult to visualize and understand (i.e., service is mentally intangible).	Customers perceive greater risk and uncertainty.	Educate customers to make good choices, explain what to look for, document performance, offer guarantees.
Customers may be involved in co-production (i.e., if people processing is involved, the service is inseparable).	Customers interact with providers' equipment, facilities, and systems. Poor task execution by customers may hurt productivity, spoil service experience, and curtail benefits.	Develop user-friendly equipment, facilities, and systems. Train customers to perform effectively; provide customer support.
People may be part of the service experience.	The appearance, attitude and behavior of service personnel and other customers can shape the experience and affect satisfaction.	Recruit, train, and reward employees to reinforce the planned service concept. Target the right customers at the right times; shape their behavior.
Operational inputs and outputs tend to vary more widely (i.e., services are heterogeneous).	Harder to maintain consistency, reliability, and service quality or to lower costs through higher productivity. Difficult to shield customers from the results of service failures.	Set quality standards based on customer expectations; redesign product elements for simplicity and failure-proofing. Institute good service recovery procedures. Automate customer-provider interactions; perform work while customers are absent.
The time factor often assumes great importance.	Customers see time as a scarce resource to be spent wisely, dislike wasting time waiting, and want service at times that are convenient.	Find ways to compete on speed of delivery, minimize burden of waiting, offer extended service hours.
Distribution may take place through nonphysical channels.	Information-based services can be delivered through electronic channels such as the Internet or voice telecommunications, but core products involving physical activities or products cannot.	Seek to create user-friendly, secure websites and free access by telephone. Ensure that all information based service elements can be downloaded from site.

Source: Wirtz and Lovelock, 2018: 20.

Figure 9 summarizes the role of customer service between maritime service triad (i.e. shipping lines, freight forwarder, and shipper). It is helpful to examine the nature of what gets exchanged between maritime service triad. In the first part of figure, shipping line conceptualized as seller. From the shipping line perspective both of actual shipper and LSP (or freight forwarder) are customer (shipper). Figure presents a seller-customer links based on shipping line's core offering. Other criterion deals with whether what the customer buys is solely for own use (as actual shipper does) or for resale to the next level of customers (as LSP does) in the supply chain. LSP resale as the shipping service is or modifies via value added service and resale to actual shipper. In this situation (as seen second part of the figure), LSP is the seller and actual shipper is customer and actual shipper buys forwarding service from LSP for own use.

Figure 9: A Classification of Seller-Customer Links in Maritime Service Triad



Source: Created by the author based on Parasuraman, 1998: 311.

2.1.1. Business-to-Business Service Market Characteristics

Business-to-business service market is consolidation of both B2B and service market. As a matter of course, it shows characteristics of both these markets. It is also important to show the differences between B2B-B2C market and product-service market for a good understanding of characteristic of business-to-business service market.

According to Wright (2004: 15), business-to-business markets are “imperative to break down trade barriers, open all markets in the modern world to the full force of unfettered competition, and this free market paradigm increases efficiency for all”. There is also a great desire among some decision-makers to ensure that issues such as justice and the environment are not neglected.

Business markets are distinct from consumer markets, according to Brennan et al. (2017), not because of the nature of the product that is sold and bought. Businesses and consumers can be distinguished along a variety of dimensions, and a number of authors have attempted to pinpoint what makes each type of market unique. Table 7 summarizes Brennan's list of dimensions and attributes. The table shows the characteristics of business markets and consumer markets and help to understand differences between them in terms of market structure, buying behavior and marketing practice. Marketing of services and marketing of goods are similar to each other. Decisions on pricing, promotion, distribution and new service/product development must be made by marketers in both markets.

In many cases, a packages combining both products and services are purchased by customers. If a company is classed as a service or a product supplier, it must be able to offer clients with the goods and services they desire. When it comes to running a successful service business, service managers have many of the same challenges as product managers do (Gordon et al., 1993: 48).

In service businesses, customer interaction is an essential component of the marketer's job in service organizations because there is no actual boundary between production, delivery, and consuming. In industrial trade, the execution of repairs, servicing, maintenance, delivery, installation, and training necessitates not only intimate ties between the supplier and the customer, but also partnerships with other parties (Varey, 2002: 19).

Table 7: Differences Between Business and Consumer Markets

Market Structure Differences		
<i>Dimension</i>	<i>Business marketing</i>	<i>Consumer marketing</i>
Nature of demand	Derived	Direct
Demand volatility	Greater volatility	Less volatility
Demand elasticity	Less elastic	More elastic
Reverse elasticity	More common	Less common
Nature of customers	Greater heterogeneity	Greater homogeneity
Market fragmentation	Greater fragmentation	Less fragmentation
Market complexity	More complex	Less complex
Market size	Larger overall value	Smaller overall value
Number of buyers per seller	Few	Many
Number of buyers per segment	Few	Many
Relative size of buyer/seller	Often similar	Seller much larger
Geographic concentration	Often clustered	Usually dispersed
Buying Behavior Differences		
<i>Dimension</i>	<i>Business marketing</i>	<i>Consumer marketing</i>
Buying influences	Many	Few
Purchase cycles	Often long	Usually short
Transaction value	Often high	Usually small
Buying process complexity	Often complex	Usually simple
Buyer/seller interdependence	Often high	Usually low
Purchase professionalism	Often high	Usually low
Importance of relationships	Often important	Usually unimportant
Degree of interactivity	Often high	Usually low
Formal, written rules	Common	Uncommon
Marketing Practice Differences		
<i>Dimension</i>	<i>Business marketing</i>	<i>Consumer marketing</i>
Selling process	Systems selling	Product selling
Personal selling	Used extensively	Limited
Use of relationships	Used extensively	Limited
Promotional strategies	Limited, customer-specific	Mass market
Web integration	Greater	Limited
Branding	Limited	Extensive, sophisticated
Market research	Limited	Extensive
Segmentation	Unsophisticated	Sophisticated
Competitor awareness	Lower	Higher
Product complexity	Greater	Lesser

Sources: Brennan et al., 2017: 11.

The concept of relationship marketing began to gain attention in research circles and the relationships and interactions between suppliers, customers, competitors and others began to be studied in this context by marketers (Gummesson, 1998). In B2B interactions, making a sale is an event in a larger effort to create and maintain a long-term relationship with the customer and ensure that sales continue to flow. Thus, the important problem is to investigate what determines the customer's propensity to remain with the current provider and to develop the relationship by investing in building links with the supplier. Historically, product quality has been seen as a fundamental precondition for eliciting this type of behavioral response from the customer (Gounaris, 2005: 126).

2.1.2. Business-to-Business Service Relationships

In the early 1970s, marketing of services started to emerge as a separate marketing area with its own concepts and models for the typical features of the services (Gronroos 1994: 352). Relationship marketing has started to emerge in the late 1980s and, at the same time, services marketing was still emerging as a popular new domain of research and understanding. Many articles have been written to strongly discuss how services differ fundamentally from products: intangible, perishable, simultaneous and mostly interactive (Sheth, 2002: 590). The concept of relationship marketing was used for the first time in 1983 and was approached from a service marketing perspective by Berry L. Then, Jackson (1985) examined relationship marketing as opposed to transactional marketing and limited its applicability scope to the field of business to business (Ciobanu and Luca, 2016: 505). After that many researchers have started to investigate business to business service relationships.

Grönroos (1990: 138) defined service marketing based on relationship, relational exchange and fulfilment promise as follows “marketing is to establish, maintain, and enhance (usually but not necessarily long-term) relationships with customers and other partners, at a profit, so that the objectives of the parties involved are met. This is achieved by a mutual exchange and fulfilment of promises”. If we clear the definition in terms of business-to-business relationships, we can say that long-term relationships are key for mutual benefit in marketplace. Especially if there are

few suppliers in the market, customers tend to establish long-term relationships for minimizing dependence. Long-term close relationship between exchange partners creates trusting relationships and increase relationship commitment. Therefore, trust and commitment are vital relational driver in B2B service relationships (Morgan& Hunt, 1999; Palmatier et al., 2006).

Palmatier et al (2006) conducted a comprehensive meta-analysis of existing relationship marketing researches. They found that relationship quality and relationship satisfaction are two other relational drivers between exchange partners in addition to trust and commitment. The authors refer to these factors as relational mediators between the antecedents and consequences of the buyer-seller relationship. The outcomes of such a relationship can be examined in terms of the parties in relational exchange. The customer focused outcomes are expectation of continuity (i.e. intention to maintain relationship), word of mouth (i.e. positively referring to seller to other potential customer), and customer loyalty. Seller objective performance is the most important seller focused outcomes of the relationship. The dyadic outcome of such a relationship is cooperation (Palmatier et al., 2006).

To develop collaborative relationship with customers that facilitate mutual benefit and increase customers' willingness to produce together is an important goal of relationship marketing (Berry, 1995). Today, creating customer value and establishing long-term relationships have become imperative for businesses to survive. For this, it is not enough to just create new relationship systems. Businesses also need to effectively manage relationships with their existing customers. Due to globalization and changing customer needs, customers need to be included in the value creation process (Juščius & Grigaite, 2011).

Business-to-business relationships can develop several structural forms such as partnership, alliances, collaboration, etc. Partnership is defined as an ongoing relationship between two firms that includes a commitment over a long period of time that includes the sharing of risks/rewards related to mutual knowledge and relationships (Ellram & Hendrick, 1995). Alliances can be seen as the evolution of long-term partnerships. Strategic alliances are a type of collaboration in which buyer and supplier aim to reduce non-value-added activities and increase their supply chain performance by joining powers. As in any long-term relationship, mutual benefit is

necessary for this partnership to continue. This is often referred to in industry and academic literature as developing a "win-win" relationship (Daugherty, 2011: 19). Alliances are not business as usual. They are formed with the intention of jointly exploiting new business opportunities and capitalizing on collaborative synergies (Bowersox et al., 1992). In the context of the supply chain, collaboration refers to two or more organizations planning, managing, and executing supply chain activities to improve performance and create value for end customers and other stakeholders (Seo et al., 2015). As stated by Horvath (2001), efficient supply chain management requires collaboration among all actors in the value chain (no matter their size or function, or relative position).

2.2. MARITIME LOGISTICS CONCEPT

Maritime transport service consists of the carriage and handling of cargo across the ocean, and as a result, it connects the widely dispersed transport links between consignors and consignees around the world. The inability to integrate maritime transport into logistics flows well causes disruptions in the supply chain. This can cause additional costs, unnecessary delays and accidents in all logistics flows (Lee & Song, 2010). This circumstance resulted in the development of the concept of maritime logistics, which offers a more holistic view of logistics operations including maritime transportation.

The concept of maritime logistics emerged and has continued to evolve primarily as a result of the increasing and changing needs of shippers and customers, as well as the continuously changing role of ports in supply and logistics chains (Panayides & Song, 2013). At the point reached in the globalization, it has become important not to have the products, but to have the products on time, at the least cost, and in the right quantity and quality (Panayides, 2006). As well, shippers expect more and more diverse services from logistics service providers (Panayides et al., 2018). On the other side, ports today operate in a new environment that emphasizes logistics and supply chain management, global sourcing, intermodal operations, and logistics outsourcing. Changes in customers' expectations have also forced shipping lines to reconsider their role in the supply chain. In order to create value, meet the various

needs of their customers, survive in fierce competition and seize future growth opportunities, shipping lines have aimed to exceed the limits of the basic maritime transportation service and provide worldwide services to global production networks (T. Notteboom & Merckx, 2006). Currently, they offer two primary value propositions to their customers: port-to-port and door-to-door transportation (Van Den Berg & De Langen, 2015).

The concept of “maritime logistics” has emerged as a result of the integrated demand for maritime transport (Lee & Song, 2010; Panayides, 2006) and has been emphasized recently. It is frequently referred to as a collection of maritime transport processes that are integral to all logistical flows (Lee & Song, 2010) and includes “the process of planning, implementing and managing the movement of goods and information involved in the ocean carriage” (Song & Lee, 2012). Therefore, maritime logistics is a much broader concept than maritime transportation. Explanation and comparison of these two concept in terms of focal point and managerial function is shown in Table 8.

Table 8. Comparison of Maritime Logistics and Maritime Transportation

	Maritime logistics	Maritime transportation
Concept	The process of planning, implementing and managing the movement of goods and information which is involved in the ocean carriage	The process of carrying and handling cargoes across the ocean
Focusing point	Maritime logistics is concerned with not only individual functions relating to sea transportation, but also an effective logistics flow as a systematic entity of the logistics integration system	Maritime transportation emphasizes individual functions relating to sea transportation
Managerial function	Sea transportation activities: e.g. contracting, shipping, sea voyage, moving cargo and loading/unloading Additional logistics services: e.g. stripping/stuffing, storage, warehousing, offering a distribution center, quality control, testing, assembly, packaging, repacking, repairing, inland connection and re-use	Sea transportation activities: e.g. contracting, shipping, sea voyage, moving cargo and loading/unloading

Source: Lee and Song, 2010: 565.

The competition in the global supply chain has forced shipping lines that aim to provide value-added services to their customers to offer integrated logistics solutions. While some shipping lines have made vertical collaboration to provide integrated logistics services to customers, some shipping lines have established logistics companies named global shipping carrier-based logistics service providers (GSLPs) within the parent company (Ding, 2010).

2.2.1. Key Activities of Maritime Logistics

Because of the characteristics of logistics and supply chain, maritime logistics concept is more applicable to carriage of containerized goods via a liner service than to carriage bulk cargoes via tramp shipping. Therefore, it would be more accurate to examine the concept of maritime logistics over containerized cargoes. Maritime logistics consist of three main activities; “shipping, port/terminal operating and freight forwarding”. Table 9 presents the main function and supportive activities of maritime logistics in terms of these activities (Lee & Song, 2010).

Table 9. Main Function and Supportive Logistics Activities of Maritime Logistics

	Shipping	Port/terminal operating	Freight forwarding
Main function	Moving cargoes between ports	Shipping reception loading/unloading cargoes, stevedoring, and connecting to inland transportation	Booking vessels, and preparing for requisite documents for ocean carriage and trade on behalf of shippers
Supportive logistics activities	Documentation relating sea trade, container tracking and information, and intermodal service	Warehousing, offering a distribution center, resting, assembly, repairing, and inland connection	Inventory management, packaging, and warehousing

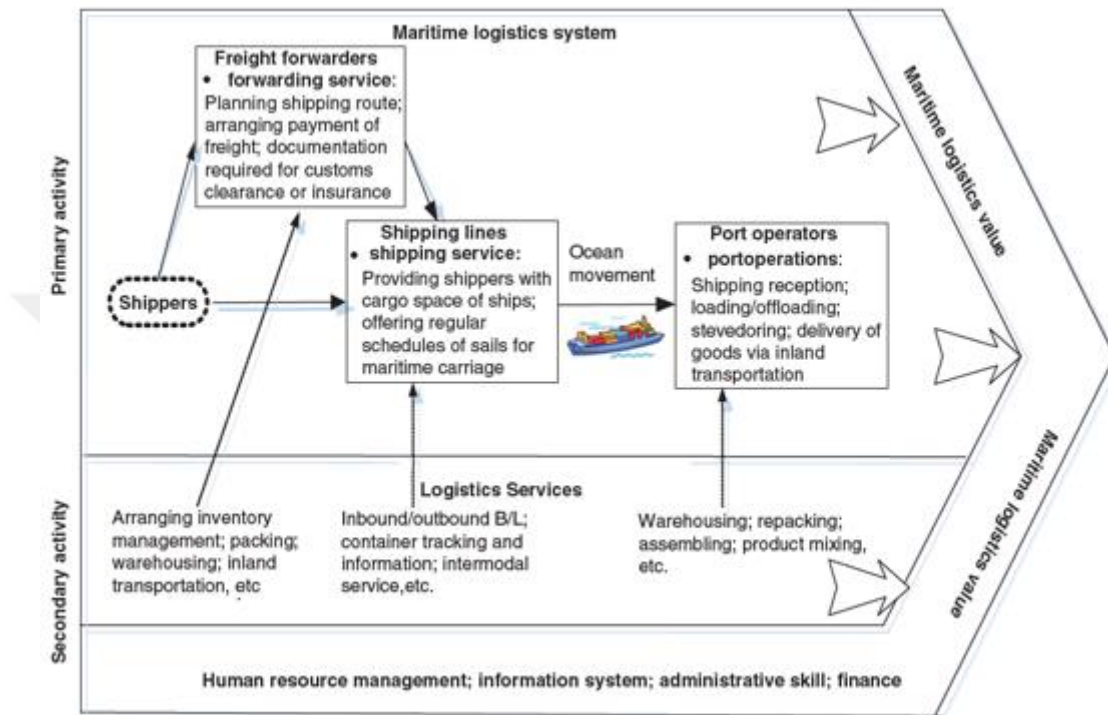
Source: Lee and Song, 2010: 566.

2.2.2. The Process of Maritime Logistics

By providing maritime logistics services, shipping lines, port operators, and freight forwarders may achieve physical, economic, and organizational integration. (Yuen & Thai, 2017: 552). Figure 10 depicts the value chain model established by Lee

and Song (2010) for the maritime transportation system and its value creation, based on Porter's (1985) value chain model.

Figure 10: Maritime Logistics System



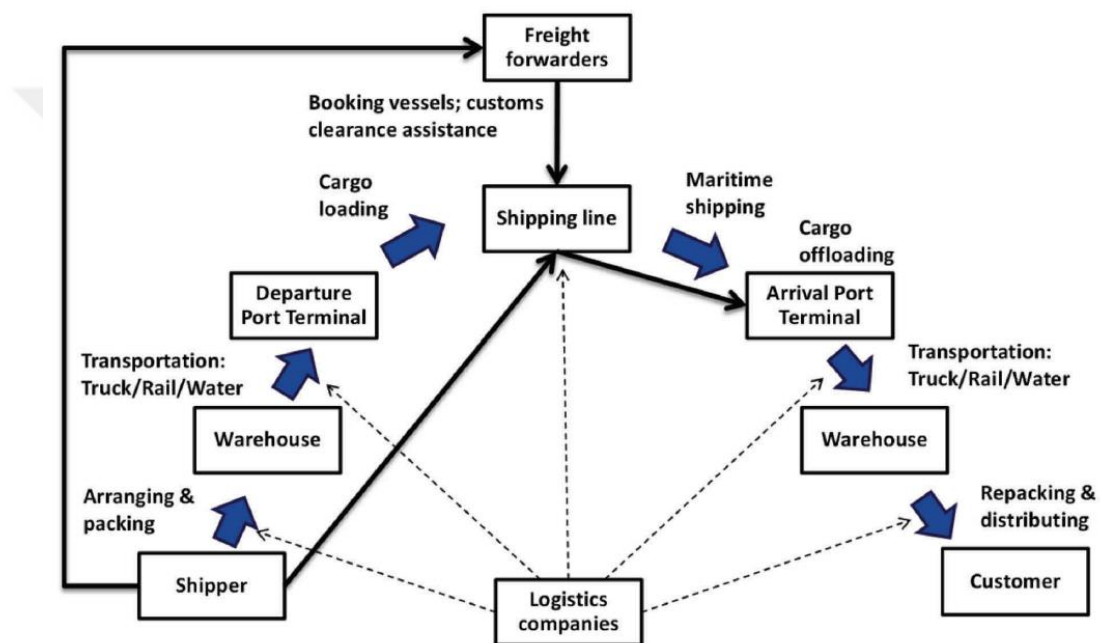
Source: Lee and Song, 2010: 567.

The maritime logistics system may be separated into primary and secondary operations carried out by the system's major players (i.e. shipping lines, port/terminal operators, and freight forwarders). The primary activities are related with core service and its requirements. The secondary activities are necessary to effectiveness of primary activities. These activities include logistics services capabilities and organizational capability in areas such as human resource management, information technology, administration, and financial support. Every actor in the maritime logistics chain strives to increase the maritime logistics value with the services they provide. Value creation in this system starts with shipper (Lee & Song, 2010).

Figure 11 depicts the whole maritime logistics process from shipper to customer. There are seven main step in container flow sequentially connected by thick arrows. There may be direct relationship between shipper and shipping line depending

on the cargo volume of shipper. The other alternative of shipper for maritime carriage is to use a freight forwarder. Logistics companies provides service to cargo such as arranging and packing and organize inland transportation as indicated by the dotted arrows. Ports or container terminals are important gates of global supply chain and provides cargo handling service. They have direct relationship with shipping lines (Besson, 2018: 6).

Figure 11: Maritime Logistics Process



Source: Besson, 2018: 6.

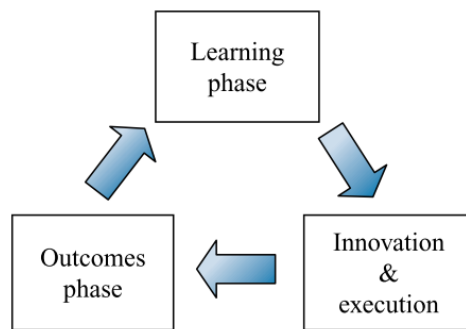
2.2.3. Maritime Logistics Value

Maritime logistics actors have close relationships in order to offer well integrated logistics services to shipper. This forces them to create value together, including shipper, that emerges with the approach of S-D logic. It is a logic-based philosophy on the commitment of all stakeholders (i.e. customers, partners, employees) to collaborative processes (Lusch et al., 2007). According to S-D logic, there are two sorts of resources that influence value co-creation: operand resources and operant resources. Operand resources are frequently static and tangible natural and

physical resources, whereas operant resources are embedded knowledge and abilities (Vargo & Lusch, 2004).

Based on S-D logic, logistics value co-creation consists of three phases (Figure 12): the learning phase (understanding customer needs, understanding service provider through the interactions, and relationship experience), the innovation and execution phase (creating customized service and innovative solutions by using knowledge acquired in the learning phase), and the outcomes phase (with the outcomes phase being linked to the learning phase). The first two phases affect the performance of both the service provider and its customer in terms of quality, efficiency, effectiveness and/or compliance (Yazdanparast et al., 2010).

Figure 12: Logistics Value Co-Creation



Source: Yazdanparast et al., 2010: 386.

Customers' perception of the gap between the service given by the provider and the service that the customer receives are what determines how much value is created by the logistics service. That's why perceived value increases as the gap between the perceived service and the service delivered gets smaller (Yazdanparast et al., 2010). The value provided by the maritime logistics system is determined by how well it reacts to customer request by successfully managing the movement of products, services, and information through maritime logistics (Lee & Song, 2010).

Value in maritime logistics, according to S-D logic, is a multidimensional term that comes through the interactions of various players within the maritime logistics system. It is co-created by them via integration and exchange of resources (Altuntaş Vural et al., 2019). Co-creation of value in maritime logistics may differ depending on

the maritime logistics partners engaged in relational exchange. The key players in maritime transportation, which include shipping lines, port and terminal operators, and freight forwarders, constitute the parties of the maritime logistics system. They need to improve their logistics value by providing their services more efficiently and effectively (Lee & Song, 2015).

2.3. MARITIME LOGISTICS ACTORS

Given the fast rise of global trade and offshore production, the maritime logistics industry is crucial for producers seeking value-added logistics services and intermodal transportation (Panayides & Song, 2013). These demands are met by maritime logistics actors. Their role in maritime logistics system are summarized in the following sub-headings.

2.3.1 Shipping Lines

Within the scope of maritime logistics, the movement of goods is carried out by a triad of maritime logistics service between shipper (importer/exporter), carrier (container shipping line) and freight forwarder. Container shipping lines are the main suppliers of freight forwarders. Therefore, logistics service quality of the LSP's service mostly depends on service offering of shipping line. Table 10 presents the service attributes of shipping lines. Apart from acting as a shipping agency and terminal handling company, a shipping line may also act as an inland transport provider, freight forwarder, and/or logistics provider. A shipping line's services to shippers (or their agent freight forwarders) might extend to providing a one-stop shopping experience. However, their position and level of engagement in logistical tasks continue to be somewhat restricted (Notteboom & Merckx, 2006).

A volatile and competitive global economy has caused supplier uncertainty and increased customer service demand. More global services for customers' needs better integrated container shipping. Shipping lines help shippers and consignees meet their needs by strategically deploying fleets and selecting ports. In this context, shipping lines must reduce logistical costs and meet consumer demands to remain competitive

in the supply chain (Tseng & Liao, 2015: 83). Shipping lines have been integrating their logistics chains horizontally and vertically for decades to improve efficiency and market responsiveness (Panayides, 2006). This tendency is waning, and more flexible and cooperative arrangements including vertical alliances, service agreements, memorandums of understanding, performance-based pricing, and dedicated terminals are taking over. This shift in emphasis has rekindled interest in SCI in the maritime logistics sector (Yuen & Thai, 2017: 552).

Table 10: Service Attributes of Container Shipping Lines

Dimensions	Service Attributes
Speed and reliability	Speed- prompt response to shipper's complaint, prompt response to claim, short transit time and high frequency of sailing Reliability- on-time pick-up, reliability of advertised sailing schedules, accurate documentation (e.g. bill of lading) and prompt to issue documentation
Value-added service	ability to provide customs clearance service, ability to provide consolidation service, availability of cargo space, ability to provide door-to-door service, and ability to provide a just-in-time service if required by shipper
Sales representative service	knowledgeability of sales personnel, frequency of sales representative calls to shippers, courtesy of sales representative, and ability of sales representative to handle problems
Integrated service	long-term contractual relationship with inland container depots, long-term contractual relationship with trailer company, a dedicated berth, and a space agreement with the other liner shipping operators
Freight rate	low freight rate, prompt response to quoting and pricing flexibility in meeting competitors' rates
Equipment and facilities	good condition of containers, ability to provide non-standard equipment and ability to provide computer system for cargo tracing
Corporate image	good reputation and good financial condition
Promotional activity	advertising in a newspaper or magazine

Source: Adapted from Lu, 2000.

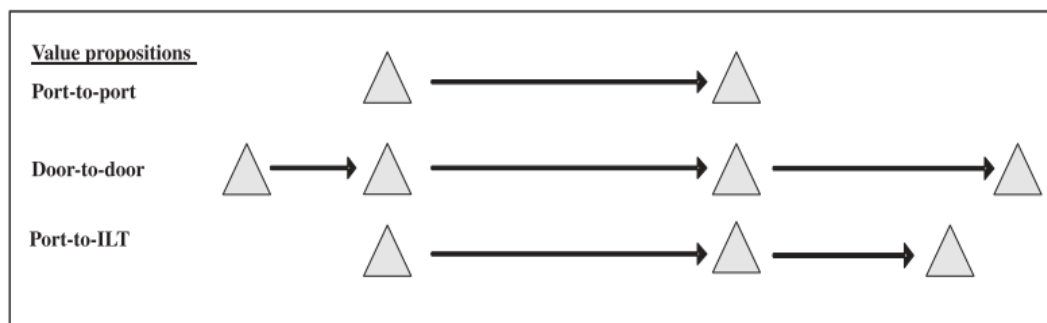
Container shipping lines serve a variety of customers, including shippers, consignees, and forwarders, and provide regular services for cargo shipments. Numerous partners supply these containerized transport network services (connections between shipping routes and ports), including intermodal transport agencies, port operators, container terminal operators (stevedores), and customs (Tseng & Liao, 2015). Reliability of schedules, service frequency, integrity, and coverage criteria for shipping lines have grown in terms of customer expectations (Ducruet & Notteboom, 2012).

Global shipping companies demonstrate a wide range of asset management strategies (Notteboom & Merckx, 2006):

- *The provision of line hauls ships (build, own, lease, charter, flag out, or contract management).*
- *Feeder operations (build, own/lease, charter, common-user).*
- *The container box fleet (build, own, lease, “grey box”).*
- *Terminals (own, lease/exclusive use/dedicated terminals, preferential berth, common- user terminals).*
- *Inland transport road/rail/barge (own, lease, contract supplier, common-user).*
- *Value-added activities (freight forwarding, warehousing, distribution, etc.).*

Rather than providing the "last mile," shipping companies in North-West Europe are transporting containers to the inland terminals (ILT) (Figure 13). Using Maersk Line's 'Inland container yard service,' shippers and forwarders can reserve cargo to and from seven inland Dutch ports (Van Den Berg and De Langen, 2015).

Figure 13: Value Proposition Ways of Shipping Lines



Source: Van Den Berg and De Langen, 2015: 34.

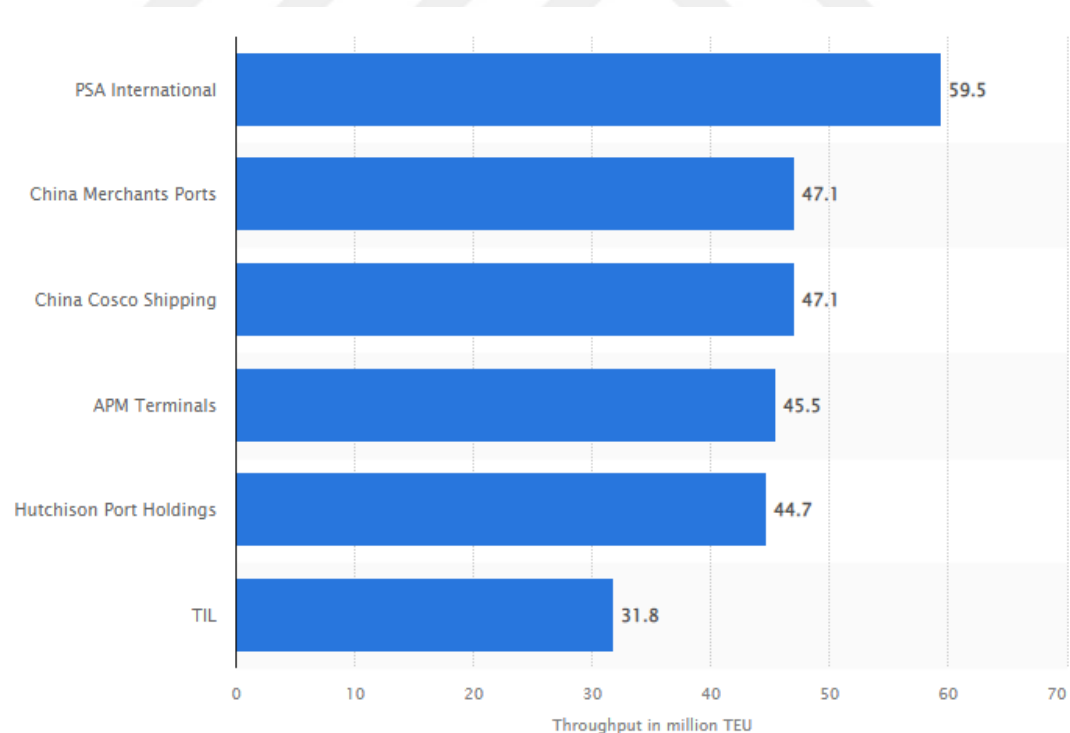
2.3.2 Port Terminal Operators

Historically, the majority of relationships between members of the maritime sector were contractual in nature. Containerization, on the other hand, altered the design of vessels, cargo handling techniques, and information and communication systems. Third parties were eliminated, transforming a "container terminal" into a nexus for multiple connected operations (Besson, 2018). One factor for private players' increased engagement in the port industry is the financial resources necessary to invest

in terminals to meet transport flows. This engagement is frequently facilitated by concessions (Pallis et al., 2008: 210).

Due to new industrial, organizational, transportation, and information technology improvements, customers' needs are always evolving. Terminals must have adequate infrastructure and hinterland links to keep up with these changes (Karatas-Cetin, 2012). Global terminal operators, like other transport corporations, are increasingly participating in logistics, notably via running logistics centers and container freight stations. In order to be the 'chosen' transport chain, terminal operators must have complete control over the whole chain (De Souza Junior et al., 2003). Container terminals have evolved to become clusters of logistics and transport services (e.g., consolidation, packaging), which are critical components of value generation for shipping lines and shippers (Besson, 2018). Figure 14 depicts the major global terminal operators (GTOs) based on equity-adjusted throughput.

Figure 14: Global Terminal Operators Worldwide in 2020



Note: Based on Equity-Adjusted Throughput (in Million Twenty-Foot Equivalent Units)

Source: Statista, 2022.

The supply chain is considered as an integrated system. Recognizing this, major terminal operators have devised new techniques to govern broader supply chains. This mentality has turned some terminal operators into logistics organizations. Services include warehousing, distribution, and low-end value-added logistics (for example, customizing products for local markets). Not every terminal operator acquiring or creates independent businesses. Effective network integration usually requires improved cooperation with third-party transport or logistics providers (Notteboom, 2004: 101).

Shipping lines are getting more involved in terminal administration in various regions of the globe, either through control of terminals devoted to them or through management of terminals by their subsidiaries. Dedicated terminals allowed lines with adequate traffic to better integrate ship schedules with terminal operations and ship, terminal, and inland transit arrangements. In most other nations, governments and public port authorities were concerned about the implications of dedicated terminals on competition and the restricted chances for shipping lines to provide efficient intermodal services. The 1990s saw an increase of dedicated terminals and governments embracing them due to increased interest in intermodal expansions, cash shortages for port authorities, and overall privatization (Heaver, 2002).

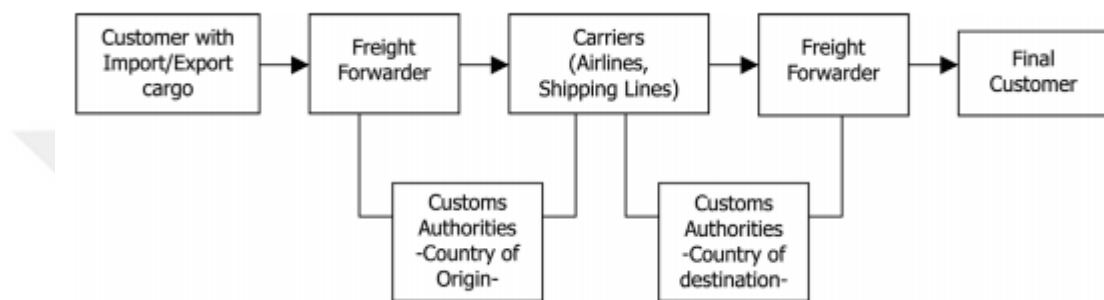
2.3.3 Freight Forwarders

Globalization of the supply chain presents both problems and possibilities for logistics service providers. Third-party logistics providers, include freight forwarders, customhouse brokers, non-vessel operating carriers, and export management organizations, has capable of giving comprehensive "solutions" for the transportation of international freight (Markides & Holweg, 2006). Historically, the international freight forwarder, or in colloquial words, the "shipping company," has been the key logistical intermediary for cross-border trade (Markides & Holweg, 2006; Murphy & Daley, 2001). International freight forwarder can be defined as an expert in international trade who may perform a number of activities to aid in the transportation of cross-border shipments (Murphy & Daley, 2001). International freight forwarder consolidates small-medium sized containerized goods and completes business

operations more inexpensively and efficiently. Freight forwarders provide small and medium-sized businesses with various logistical solutions (Huang et al., 2019).

Figure 15 depicts the major players in freight forwarding. As shippers become increasingly global in their sourcing and logistics management, freight forwarders are discovering they need to create worldwide network relationships (Bernal et al., 2002).

Figure 15: Structure of the Freight Forwarding Industry



Source: Bernal et al., 2002: 240.

Davis and Mentzer (2006) observed that the quality of logistics service has a favorable impact on customer loyalty in the logistics setting. The gap in logistics service quality expectations are relatively low for long-term customers, indicating the importance of logistics service in supplier-customer interactions, according to the authors.

Table 11 presents the service attributes of logistics service providers (LSPs) grouped under service quality dimensions. When the service quality literature is examined, it can be seen that many service quality variables are the same as relationship marketing variables. For this reason, it can be said that the main factor in providing customer-oriented service is to provide high quality service. Services like maritime logistics, where the product is the service itself, can have varying levels of quality based on the relationship between the company and its customers. There have been few empirical and theoretical research on this topic in the literature on relationship quality in maritime logistics (Shin et al., 2018: 1080).

Table 11: Logistics Service Attributes of LSPs/Freight Forwarders

Dimensions	Service Attributes
Reliability	Accuracy of documents Short transit time Consistency of the service
Assurance	Firm's reputation Track and trace service offering No damaged goods while in transit Staff's knowledge and expertise Offering of one-stop service High standard service
Tangibility	Modern equipment EDI and e-commerce service offering
Empathy	Keep customers' information confidentially Care for customers' needs and interests Customer Relationship Management (CRM)
Responsiveness	Fast responses to customers' requests World-wide service offering Offering of updated freight rates Good care of the customers Owned overseas network Consolidation offering Variety of services Express delivery service offering Responsiveness of the service Staff's willingness to provide service
Service cost	Reasonable price Ease of payment Appropriate credit term Discount offering

Source: Adapted from Banomyong and Supatn, 2011.

CHAPTER THREE

RELATIONSHIP MARKETING IN THE MARITIME LOGISTICS INDUSTRY

This chapter investigates the relationship marketing literature in the maritime logistics industry, with a particular emphasis on relationship marketing strategies (RMS), relationship quality, customer loyalty, and collaboration, all of which are consistent with the research model proposed for empirical research in next chapter. The qualitative study conducted to explore relationship marketing strategies performed by container shipping lines is also included in this chapter.

This chapter is organized as follows. Section one examines the relationship marketing practices in the maritime logistics industry within the scope of primary and support activities in the value chain framework. Second section explains the relationship quality dimensions from the supply chain context. Section three focuses on customer loyalty and following section explains cooperation and collaboration in the maritime logistics industry.

3.1. RELATIONSHIP MARKETING PRACTICES IN THE MARITIME LOGISTICS INDUSTRY

Porter's idea of creating competitive advantage through the management of an organization's internal activities that make up its value chain has gained wide acceptance by many researchers. Lee and Song (2010) adapted Porter's value chain system to maritime logistics and figured the maritime logistics value creation of maritime logistics partners (Figure 10 mentioned in Chapter 2).

Numerous marketing researchers consider value and value exchanges to be the basis of relationship marketing (Ballantyne, 1994; Ballantyne et al., 2003; Grönroos, 1997; Raval & Grönroos, 1996b; Sanzo & Vázquez, 2011). Ballantyne (1994: 3) highlights the importance of value exchanges in supply chain contexts and defines relationship marketing as an emerging disciplinary framework for creating, developing and sustaining value exchanges between the parties involved. Main logic in value

exchange is not what kind of service the company offers, but what kind of relationship the company can maintain (Ravald & Grönroos, 1996b).

In the maritime logistics context, value exchange occurs between port/terminal operators, shipping lines, and two main customer of shipping lines; freight forwarders and direct shipper (Balci et al., 2019; Lee & Song, 2010). They endeavor to create maritime logistics value together within the maritime value system they are in. A strategy devised to focus on one aspect of the maritime logistics value chain may have impacts on other actors in the maritime supply chain. Although marketing studies consider relationship marketing to be one of the most successful business development strategies in the business-to-business and services industries (Juščius & Grigaite, 2011), relationship marketing strategies and its implementation worldwide are not precisely defined in the context of maritime logistics industry. To fill this gap in the literature, an exploratory study was conducted to reveal the current relationship marketing practices of container shipping lines (CSLs) in Turkey.

We employed qualitative research design as it enabled in depth investigation of the relationship marketing strategies performed in the maritime logistics industry. Recognizing that there is no thorough study on the relationship marketing strategies employed by container shipping lines in the pertinent literature, a qualitative research approach is appropriate for this study. This study utilizes a small-scale survey (consisting of exploratory interviews) among the several qualitative research methods known. By allowing researchers to collect data in which selected participants freely express their thoughts, opinions, and perspectives about current research problems, exploratory interview methods are frequently used to study obscure issues and identify developing patterns in the field (Collis & Hussey, 2014). We investigated the relationship marketing tactics used in the Turkish container shipping business by conducting semi-structured interviews, a common data collection technique in qualitative research. Open-ended questions are ideal for eliciting clear responses from respondents regarding their perspectives and experiences (Foddy, 1994). To achieve this objective, a questionnaire with four open-ended questions is sent to container shipping lines and freight forwarders to get their subjective perspectives on the topic (Appendix 1).

To reflect the views of both service supplier and customer, we used a sample of container shipping lines and freight forwarders (FFs) (Table 12) and employed the semi-structured interview techniques. Interview data were collected from the 12 CSLs and 10 FFs and analyzed by using content analysis method. The results of the conducted qualitative study and review of other related studies were presented under the following sub-topics.

Table 12: Profile of the Interviewees of Qualitative Research

Company	The position of the interviewee	Total Work experience in the sector	Company	The position of the interviewee	Total Work experience in the sector
CSL1	Agency trade manager	10	FF1	Branch manager	27
CSL2	Country sales manager	22	FF2	Operations specialist	10
CSL3	Senior trade manager	17	FF3	Operations specialist	21
CSL4	Line manager	20	FF4	Sales manager	10
CSL5	Customer service manager	25	FF5	General manager	12
CSL6	Regional manager	21	FF6	Operation Manager	15
CSL7	Customer service manager	10	FF7	Sales representative	10
CSL8	CEO	31	FF8	Sales representative	10
CSL9	Sales representative	12	FF9	Sales representative	12
CSL10	Sales representative	10	FF10	Sales representative	14
CSL11	Sales representative	10			
CSL12	General manager	24			

Source: Author

For the research, we collected data by adopting a multistage purposeful random technique. The interview sample selection process was undertaken with care. First, a list of container shipping companies with active operations in Turkey was compiled. The members of the Association of International Forwarding and Logistics Service Providers (UTIKAD) were used to compile the list of top freight forwarders. Second, to guarantee that the sample is geographically representative, the shipping lines and freight forwarders selected for interviews represent firms from all of Turkey's major trading regions. In addition, both container shipping lines and freight forwarders in the sample set have a global presence and a multi-national organization. Since we exclusively examined the customer relationships of container shipping lines, the respondents from container shipping lines should be familiar with customer

interactions. Therefore, we have clearly requested that the responders have direct interaction with freight forwarders or be company managers/owners. In addition, we specified that the freight forwarder respondents have job requirements that involve direct communication with container shipping lines, or that they be manager/owner. We analyzed the interview transcripts using a content analysis technique and a deductive methodology. Content analysis is defined as any method that infers meaning by consistently and objectively detecting communications' unique properties (Holsti, 1969: 608). Depending on the research purpose and the data, a deductive method might be highlighted by referring to a priori categories that have been employed in relevant earlier research (Berg, 2009; Mackey, 2013). The coding process can employ both manifest and latent themes. Latent content reflects the researcher's interpretation of the words, phrases, and passages, as opposed to manifest coding, which focuses on the presence of certain communication elements detected in the communication (Mackey, 2013). Within the interview transcripts, we analyzed the structural significance (latent content) of the underlying structure. The interview transcripts were read multiple times, and the expressions commonly stressed by the participants were analyzed based on patterns and themes pertinent to the relationship marketing in service business literature.

The summary of the literature review on relationship marketing strategy dimensions reveals a great deal of variation in both the number and kind of factors. Review of the various studies under the RMS topic (1.5. Relationship Marketing Strategies in Service Industry), showed that dimensions of relationship marketing strategy proposed by Sanzo and Vázquez (2011) are more comprehensive and more applicable to the maritime logistics industry as a business-to-business service market. The authors propose three key dimensions of relationship marketing strategies from the scope of supply chain relationships. The first dimension relates to the firm's fundamental orientation toward customer relationship marketing (i.e., a long-term, customer-centric approach); the second dimension emphasizes the importance of obtaining personalized information about each customer in order to conduct a thorough customer value analysis, which is the primary mechanism for achieving customer loyalty; and the third dimension encompasses technological (CRM), procedural (service-oriented organization), and human-related dimensions. In the qualitative

research, these three dimensions considered as the main categories of content analysis because they include the dimensions proposed in previous studies and that it deals with the issue from the perspective of business-to-business service, including maritime logistics.

3.1.1. Customer Loyalty Focused Practices

First, a corporation must realize that a long-term relationship with customers will benefit the business. We asked CSL participants if they want long-term partnerships with freight forwarders and what the benefits would be for their business. A CSL expressed this benefit as follows:

...we absolutely care about establishing long-term relationships with customers. In times of uncertainty when the trade volume is affected by various factors, our ability to maintain our business volume and make long-term planning depends on long-term relationships. Other times, working with our customers for a long time ensures that our business volume and cargo diversity are constantly increasing. This means an increase in our commercial power in the sector. Our ability to cooperate with other container shipping lines develops in conjunction with our commercial power.

Long-term relationships impact freight forwarders' operations. Therefore, the same question was directed to the freight forwarder professionals as follows “Do you care about developing long-term relationships with container shipping lines? What are the benefits of such a relationship for your business?” A FF highlighted this benefit as follows:

...in the container shipping industry, our shipping line alternatives have decreased considerably, especially after mergers in the last 5 years. If we do not establish a long-term relationship in the almost-monopolized market, this would be a huge disaster for all freight forwarder companies. It is essential to establish long-term relationships with container shipping lines for the continuity of the service we provide to our customers. Since such a relationship will provide us with some priorities in the service we receive, our dependence on the shipping line will be reduced.

Both shipping lines and freight forwarders appreciate long-term ties, according to the responses.

The result of the semi-structured interview demonstrated that most performed RM practices focused on customer loyalty are relationship pricing and loyalty

programs (Table 13). Loyalty programs are important RM strategy that enables long-term close relationships. There are numerous types of loyalty programs, including membership (special privileges for members), rewards (gifts and perks received based on business volume), communities (which foster a sense of belonging and identity), and interconnected business processes. These programs are designed to develop direct, customized relationships with customers in order to foster their affective participation and commitment to the focal firm, as well as customer loyalty (Sanzo and Vazques, 2011: 55). In maritime logistics industry, forms of loyalty programs are different. Container shipping lines gives privilege and priority in services to the loyal customer. These programs consist of priority in shipment, availability of equipment, prompt response to customer requirements etc.

Table 13: Customer Loyalty Strategies

Customer Loyalty Focused RM Strategies	Frequency/Percentage	
	CSL	FF
Relationship Pricing		
Discounts on freight rates	9/75	8/80
Deferred payment	5/41,6	8/80
Flexibility in demurrage free time	1/8,3	2/20
Loyalty Programs		
Priority in shipment	6/50	10/100
Availability of equipment	3/25	10/100
Prompt response to customer requirements	3/25	-/-
Global customer department	1/8,3	-/-
Relationship investment	1/8,3	-/-
Logistics service capability		
Intermodal service (door-to-door service)	6/50	-/-
Communication		
Timely and reliable information flow	3/25	3/30
Celebration of special days together	1/8,3	-/-
Core Service		
Reliability of service	3/25	-/-
Geographical coverage	1/8,3	-/-

Source: Author

From the interviewed CSLs' point of view, the most important practice for attain customer loyalty is relationship pricing, such as deferred payment, discounts on freight rates, and flexibility in demurrage free time. This result match with the answer of FFs as they stated that these practices are most performed customer loyalty practices

of CSLs in their relationship. Another practices that interviewed FFs stated are the loyalty programs such as the priority given to finding empty containers and spaces on board. Similarly, priority in shipment is mostly performed loyalty programs by the CSLs. Other important performed loyalty programs by the CSLs such as availability of equipment and quick response to customer requirements have the same percentage. One of the CSLs indicated that they established Global Customer Department for the special (profitable) customers. Relationship investment is only specified by a CSL as a relationship marketing practice to achieve customer loyalty. Logistics service capability to provide intermodal services such as door-to-door service and inland transportation service is highlighted by half of the CSLs as a relationship marketing practice that used to enhance customer relationships. Timely and reliable information flow is the other common factor affecting relationships between CSLs and FFs. One CSL indicated that the celebration of special days together builds warm relationships with the customer. 4 of the CSLs highlighted the importance of core service and indicated that core service reliability and geographical coverage attract and maintain customer loyalty.

Core service strategy and service augmentation (value added services etc.) are two vital relationship marketing strategy to establish long-term close customer relationships (Berry, 1983; Camarero Izquierdo et al., 2005; Sanzo & Vázquez, 2011). Core services provided by maritime logistics actors are shipping services and forwarding services. In context of maritime value chain, Table 14 presents the primary and secondary activities of freight forwarders and shipping lines.

Table 14 : The Primary and Secondary Activities of Maritime Service Providers

	Freight Forwarders	Shipping Lines
Primary Activities	Planning shipping route Arranging payment of freight Documentation required for customs clearance or insurance	Providing shippers with cargo space of ships Offering regular schedules of sails for maritime carriage
Secondary Activities	Arranging inventory management Packing Warehousing Inland transportation Other related activities	Inbound/outbound bill of lading Container tracking and information Intermodal service

Source: Adapted from Lee and Song, 2010.

The primary activities are those core services offered by shipping lines and freight forwarders, whereas secondary activities assist the primary activities in running more efficiently. Additional logistics services and organizational capabilities provided by these providers, namely human resource management, information systems, administrative capabilities, and financial assistance, are required to support primary activities (Lee & Song, 2010).

3.1.2. Customer Value Focused Practices

Customer value-focused practices entail determining how a container shipping line may gather personal information about customers in order to understand their requirements and the value they derive from the container shipping line's service. They use that information to prompt response to customer's operational and commercial requirements, conduct a deep customer value analysis and customer profitability analysis.

According to definition of Peck et al. (1999) customer value is the impact of the supplier's offer on the customer's own value chain. This offer must provide improved performance, higher perceived benefits, or lower customer costs. Thus, there is clear added value from the customer's point of view. The authors express that the starting point of any relationship marketing program should be the clear definition and specification of the exact nature of the value to be delivered, the market segment by market segment, and even the exact nature of the customer by the customer. In short saying, this is value proposition or "how to intend to create value for customers. Panayides and So (2005: 39) assert that customer value is produced in the logistics setting through two mechanisms: cost reduction and increased responsiveness to customer requests. Cost savings can be realized through lowering transaction costs through integration, which improves the accuracy of shared information. The key to establishing a high level of logistics service quality is rapid response to customer problems with the appropriate solutions.

In context of logistics value, "7R" definition of logistics describes the characteristics of a company's product offering that leads to value creation through logistics service. Part of the logistics value that a company creates for its customer is

its ability to deliver the right product in the right amount at the right place at the right time for the right customer in the right condition at the right price (Yazdanparast et al., 2010). Therefore, suppliers should investigate whether the service they offer meets customer expectations or whether service improvements can be made.

Core product and supporting services, as well as relationship benefits (e.g., safety, credibility, security) that might promote customer loyalty are all factors that contribute to a customer's perception of 'value' (Sanzo & Vázquez, 2011: 55). Service firms can more precisely customize the service to the current situation after learning the specific characteristics and needs of individual customers by collecting their data (Berry, 2002).

Table 15 summarizes how CSLs obtain information and how they use obtained information in customer relations according to interviewees' responses. Container shipping lines collect customer information via direct contact of their sales representative and store it in the customer database in order to know customer needs and develop relationships. Container shipping line's effort to obtain customer information provides mutual benefit for partners. Information sharing between CSLs and FFs enable to long-term relationships by building mutual trust. From the CSLs side, information gathering helps to understand customer needs, to make customer value analysis and customer profitability analysis. From the view of FFs, information sharing provides a prompt response to their operational and commercial demand and necessary for cooperation.

Table 15: Customer Value Research

Customer Value	Frequency/Percentage	
	CSL	FF
Information Gathering/Sharing		
Personal and direct contacts (sales representative)	12/100	10/100
Customer database	12/100	-/-
Online meeting	3/25	1/10
Use of Information		
Understanding customer needs	12/100	-/-
Prompt response to operational and commercial demand	2/16,6	10/100
Customer value analysis	6/50	-/-
Customer profitability	4/33,3	-/-
Cooperation	-/-	3/30
Service recovery	-/-	1/10

Source: Author

3.1.3. Internal Capability of Container Shipping Lines

The firm must develop internal capabilities, both technological/procedural and human to achieve the firm objectives and create, develop, and analyze a customer database (Grönroos 1995). Emerging internet and mobile applications created more collaborative and social communication channels for firms who wants to build long-term customer relationships (Kumar, 2014). Developing information technologies and customer-oriented changes in relationship management approach of firms contributed to the development of the customer relationship management (CRM) concept. Customer relationship management (CRM) is a company's attempt to understand its customers through a combination of people, processes and technology. It focuses on customer retention and relationship development with customers. (Chen & Popovich, 2003). Gummesson (2008: 7) propose a CRM definition based on relationship marketing; “it is the values and strategies of RM – with special emphasis on the relationship between a customer and a supplier – turned into practical application and dependent on both human action and information technology”.

A CRM business strategy leverages marketing, operations, sales, customer service, human resources, R&D and finance, and information technology and the Internet to maximize customer interactions. CRM provides to customer in customization, simplicity and convenience to complete transactions regardless of the channel used for interaction. Table 16 presents the CRM benefits in supplier-customer relationships (Chen & Popovich, 2003).

Table 16: CRM Benefits

Customer data sharing throughout the organization resulting in:	CRM innovative technology:
○ Superior levels of customer service ○ Opportunities for cross-selling and up-selling ○ Vast information about customers' habits and preferences ○ Integrated and complete view of the customer ○ Improved targeting to segments and individual customers ○ Efficient call centers/service centers	○ Extends capability to the customer for self-service and Internet applications ○ Attracts existing and new customers through personalized communications and improved targeting ○ Integrates customer and supplier relationships ○ Constructs metrics to analyze common and unique customer patterns

Source: Chen & Popovich, 2003: 675.

Table 17 summarizes the internal capability of CSL indicated by CSLs and FFs who participated to the interview. In addition to CRM systems, Electronic Data Interchange (EDI), problem solving applications (salesforce, palantir etc.), and online service capabilities of shipping line (operational/documentation process, online reservation, online pricing, online vessel program, container tracking service etc.) are other technology based internal capabilities which necessary in customer relations.

Table 17: Internal Capability of CSLs

Internal Capability	Frequency/Percentage	
	CSL	FF
Technological Capability		
CRM	12/100	-/-
Online services (operational/documentation process, online reservation, online pricing, online vessel program, container tracking service)	2/16,6	5/50
EDI and problem solving applications (Salesforce, Palantir etc.)	2/16,6	4/40
Communication technologies	1/8,3	1/10
Procedural Capability		
Annual satisfaction survey	8/66,6	10/100
Customer visit after survey feedback	8/66,6	8/80
Feedback after each shipment/ Service satisfaction survey	2/16,6	5/50
Service excellence	1/8,3	1/10
Customer desertion	1/8,3	-/-
Human Capability		
Knowledge of employee	11/91,6	10/100
Prompt response to customer requirements	8/66,6	9/90
Understanding customer needs	10/83,3	-/-
Staff stability	6/50	-/-
Employee trainee (in and out training course)	5/41,6	-/-
Operational capability	-/-	5/50
Attitude of employee	1/8,3	3/30
Employee satisfaction	2/16,6	-/-
Willingness to help customer	-/-	2/20

Source: Author

Customer-oriented container shipping lines must develop a set of company procedures such as a procedure to research the reason for customer desertion. In the container shipping industry, CSLs mostly apply annual satisfaction surveys to take feedback from their performance on operational, commercial, financial, and documentation processes. However, FFs expect such a survey after each shipment. After the feedback, CSLs visit the customer to evaluate the result of the survey and to

investigate the cause of possible dissatisfaction. Thus, they struggle to prevent customer desertion.

Finally, perhaps the most important internal capability is human capability. As in all service industries, the key factor in the container shipping industry is the human. The capabilities such as knowledge of employees, to know customer needs, prompt response to customer requirements are important human resource competence that has considerable impacts on customer loyalty. These factors are mostly indicated as important service attributes of container shipping lines in various earlier studies, such as in Kannan et al. (2011) and Thai (2008). Human resource management is an important capability dimension in the container shipping context (Lu, 2007).

3.2. RELATIONSHIP QUALITY IN THE MARITIME LOGISTICS INDUSTRY

In the context of a working relationship, 'relationship quality' refers to the extent to which both parties are engaged to an effective and long-term relationship. A supply chain analysis may be conducted based on relationship quality indicators (Fynes et al., 2005). Numerous researches have been done on the concepts and dimensions of relationship quality. There is, however, no unanimity on its constituents (Skarmeas et al., 2008). According to Naudé and Buttle (2000), evaluating the quality of any relationship has remained a difficult task despite the relationship's acknowledged importance in business-to-business marketing. They began their analysis of this complicated area by establishing five fundamental elements of high-quality business-to-business relationships: trust, needs fulfillment, supply chain integration, power, and profit. Athanasopoulou (2009) reviewed the existing studies on relationship quality between 1987 and 2007 and found that "the only area of convergence is the three major dimensions (trust, commitment and satisfaction) that have been used in many studies and have been validated in different contexts".

Trust and commitment are two intrinsically connected notions that foster a relationship between business-to-business customers and facilitate collaboration (N. Kumar et al., 1995; Morgan & Hunt, 1994; Skinner Beitelspacher et al., 2012). In addition, Min et al. (2007) claimed that trust and commitment are the most often

mentioned variables for supporting intra-network collaboration in discussions of partner orientation (a firm's internal propensity toward accepting SCM). Thus, this study posits that relationship quality is a long-term working relationships formed by the combination of a partner's trust in and commitment to a supplier. In accordance with the relationship quality researches in supply chain literature, we focus on trust and commitment as the key components of the maritime supply chain relationship quality.

Two important dimensions of relationship quality, trust and commitment, have been extensively studied in logistics industry studies, including maritime logistics. Chou et al. (2018) aimed to explore the interaction of competitive capabilities, including the ability of LSPs to collaborate with customers and the quality of their relationship (trust, dependency and commitment). They found that once a customer gains trust in an LSP; they are more likely to keep doing business with that LSP in the long term. Shin et al. (2018) examined the differences in perceptions of supply chain relationship quality (SCRQ) amongst maritime logistics firms. Trust and commitment have varying effects on the SCRQ, according to the results of this study. It has also been observed that trust as an SCRQ component has a major impact on supply chain performance (SCP), although commitment does not. According to Jang et al. (2013), logistics service quality is an important factor in fostering customer loyalty, so they examined how relationship quality impacts shipper loyalty in the unique setting of container shipping. Container shipping lines should improve their logistics service quality and customer relationship quality, according to the research, in order to gain shippers' loyalty at levels higher than simple satisfaction. Caliskan and Esmer (2020) investigated relationship marketing strategies in the port business, specifically those between container terminals and shipping lines, were analyzed to see if they were worth investing in and implementing in order to improve customer relationship performance by using relationship quality as a mediator. They found positive impact of relationship satisfaction on relationship quality (i.e. trust and commitment), positive impact of relationship on the loyalty of shipping lines.

3.2.1. Trust

In the supply chain literature, trust is one of the most often discussed characteristics of supply chain relationships (Fynes et al., 2005). It is a vital aspect that reinforces supply chain partner commitment and considerably raises the likelihood of supply chain performance. Lack of trust amongst supply chain partners frequently results in inefficient and ineffective performance due to increased transaction costs (verification, inspections, and certifications of their trade partners). While the literature frequently makes reference to a link between trust and commitment, there is a dearth of empirical evidence in the supply chain (Kwon & Suh, 2005). Ganesan (1994) defined trust as “the willingness to rely on a party in whom one has confidence”. Morgan and Hunt (1994) provide another conventional definition of trust as "confidence in the other party's reliability and integrity".

Trust is one of the key aspects of commitment-trust theory. There is no direct link between trust and retention that is established within the context of this theory. Instead, only an indirect effect is proposed through commitment as a mediating variable (Wallenburg et al., 2011: 85). With increasing competition and environmental uncertainty, service providers are focusing their marketing efforts on establishing relationships to increase customer retention. The basic philosophy behind such initiatives is to enhance the lifetime value of customers and increase customer loyalty rather than traditional, short-term transaction-oriented marketing approaches (Mishra & Vaithianathan, 2015).

Trust is a belief, sentiment, or expectation about a partner that reflects the expertise, credibility, or intention of a partner. There are three basic dimensions of trust (Sanzo & Vázquez, 2011):

(1) Capability - this term refers to the trustor's view that the trustee possesses the necessary competence and abilities for the duty.

(2) Honesty (or integrity) - the trustor's confidence in the trustee's ability to uphold its promises and adhere to a set of accepted principles.

(3) Benevolence — this term relates to the trustor's belief that the trustee is really concerned about his or her welfare.

Anderson and Narus (1990) identifies the outcome of trust as the “firm’s belief that another company will perform actions that will result in positive outcomes for the firm as well as not take unexpected actions that result in negative outcomes”. Beccerra and Gupta, (1999) classified both the major negative repercussions of a lack of trust and the major good outcomes of trust-building partnerships. Concerning the negative consequences of a lack of trust, they noted the importance of increased transaction and agency costs in low-trust partnerships. For instance, a manager's time and energy spent managing low-trust connections is more than their time and energy spent managing high-trust ones. By contrast, a highly trusting relationship values open communication between partners and a willingness to take risks. People who have a high level of trust are not scared to disclose all information and believe in the substance of the information they get, and business partners who have a high level of trust are more willing to take risks than business partners who have a low level of trust. Additionally, they claimed that if mistrust issues are resolved, overall performance will improve (cited by; Kwon & Suh, 2004: 5).

Ellram and Krause (1994) asserted that trust may be established by establishing an environment in which supply chain participants willingly go above and beyond the relationship's basic requirements in order to enhance the supply chain's chances of success. In the context of supply chain management, trust refers to an organization's readiness to rely on a supply chain partner (Ireland & Webb, 2007; Moorman et al., 1993).

3.2.2. Commitment

Commitment to a relationship entails a desire to maintain a commercial relationship and a readiness to work to secure the connection's long-term sustainability. (de Ruyter et al., 2001; Shin et al., 2018). Morgan and Hunt (1994) defines commitment as an “exchange partner believing that an ongoing relationship with partner is so important as to warrants maximum effort to maintain it”. Stating that commitment is at the center of relationship marketing, they drew attention to its importance for a long-term relationship. Their study shows that the commitment is related to the intention of maintaining the relationship. Commitment, in the supply

chain context, refers to a partner's attitude toward the formation and maintenance of a stable, long-term mutual partnership (E. Anderson & Weitz, 1992; Moore, 1998; Zhao et al., 2008).

Palmatier et al. (2006)'s meta-analysis of the relationship marketing literature demonstrates that strong inter-organizational relationships have a beneficial effect on performance. Their research aided in identifying relationship marketing antecedents such as relationship benefits, dependence, communication, and expertise, all of which can result in increased levels of commitment between service providers and their customers. According to the relationship marketing paradigm, enterprises should make an effort to earn the commitment of channel partners, as commitment is inextricably related to performance (Palmatier et al., 2007).

Commitment has played a central role in the development of supply chain relationships (Skarmas et al., 2008). According to Anderson and Weitz (1992) relationship-specific investments such as the training and dedication of personnel to a specific relationship are strong signals of commitment to channel partners. Consistent with this, the current study examines commitment as a relationship quality dimension between maritime logistics partners.

3.3 RELATIONSHIP OUTCOMES IN THE MARITIME LOGISTICS INDUSTRY

Under this section, two customer-based relationship outcomes included in the conceptual model of the research, loyalty and collaboration, are examined from the perspective of maritime logistics.

3.3.1. Customer Loyalty in the Maritime Logistics Industry

Especially considering the relationships between suppliers and their customers, it is understood that customer loyalty is a key structure in marketing and service research (Jang et al., 2013). The purpose of relationship marketing is to increase customer loyalty and retention. The advancement of this approach has changed the emphasis away from investing large marketing resources in acquiring new customers

and toward caring for existing customers and giving them with incentives to repurchase (Gummesson, 1998). According to researches, the cost of acquiring and servicing a new customer is five to six times that of servicing an existing customer (Heskett et al., 1994; Ndubisi, 2005).

A committed customer's lifetime value may be substantial, even more so when referrals are factored into the economics of customer retention and recurring purchases of related services (Heskett et al., 1994). Customer profitability is the main criteria to consider when investing in a relationship. According to Ndubisi (2004), businesses must make sacrifices and significant investments in order to develop relationships with loyal or potentially loyal customers. According to Reichheld and Sasser (1990), a 5% increase in customer loyalty can increase profit growth from 25% to 85%. Relationship marketing creates competitive advantage for firms because of its positive impact on retention and loyalty. As long as the relationship continues, it becomes difficult for competitors to find new customers (Gummesson, 2004).

The benefits of a long-term relationship are the biggest factor in making customers loyal. Trust, commitment, and convenience are relationship quality dimensions that make long-term customers less sensitive to price changes. (Gummesson, 2004). However, customers must be continually encouraged to stay loyal with a variety of amenities, priorities, and value-added services.

Customer satisfaction, service quality, and relationship quality are mostly examined key construct that have impact on customer loyalty in the relationship marketing literature. Heskett et al. (1994) viewed customer loyalty as a direct result of customer satisfaction. Customer satisfaction is greatly influenced by the value of services offered by service supplier. Providing superior value through high-quality services and high switching costs are two of the most effective ways means to increase customer loyalty (Lam et al., 2004; Yang & Chao, 2017). Caceres and Paparoidamis (2007) examined the relationships between service quality (technical and functional), relationship quality (relationship satisfaction; trust and commitment), and loyalty. They discovered that the quality of relationships (and their determinants) had an effect on business loyalty. Additionally, they established the significance of relationship satisfaction as a mediator variable between the service quality and business loyalty constructs. According to Ndubisi (2007) trust, commitment, communication and

conflict handling are key construct of relationship marketing that have significant impact on customer loyalty.

In the maritime logistics context, there are several studies that examine effects of relationship marketing on customer loyalty. Jang et al. (2013) examined the influence of logistics service quality on customer loyalty via relationship quality in order to better understand relationship challenges in the container shipping industry. The findings indicate that container shipping companies must focus on both logistics service quality and relationship quality in order to maintain high levels of customer loyalty. Chao and Chen (2015) explored how switching costs help prevent customers from switching their cargo from one carrier to another. They examined the impact of perceived service quality on customer loyalty, and the mediation effect of switching cost for the liner shipping industry. They demonstrated the mediation effect of switching cost between perceived service quality and customer loyalty. Balci et al. (2019) investigated the effect of relational bonding strategies (financial, social, and structural) on customer satisfaction and loyalty in the container shipping industry. They discovered that relational bonding strategies had the most direct influence on customer satisfaction and the greatest direct effect on customer loyalty. Gil-Saura et al. (2018) performed a study to determine the factors that contribute to satisfaction and its effect on freight forwarders' loyalty to freight transportation service providers (by road, maritime, and air). They discovered variances in the dimensionality of service quality across B2C and B2B contexts, and even within the latter, they discovered differences between freight forwarding and other industries. Shin et al. (2017) investigated the effect of corporate sustainable management activities (CSMA) on customer satisfaction, word of mouth intent, and intention to repurchase. They discovered that the environmental and economic aspects of CSMA contribute significantly to customer happiness, and that increased customer satisfaction has a beneficial effect on word of mouth and repurchase intentions, two critical components of behavioral loyalty.

3.3.2. Collaboration in the Maritime Logistics Industry

Collaboration, in general, involves two or more businesses collaborating to achieve more success than is possible in isolation (Daugherty, 2011: 22). Relationship marketing aims to engage and integrate customers, suppliers, and other infrastructure partners in the development and marketing activities of a business. As a result of this involvement, the firm establishes close interactive relationships with its suppliers, customers, and other value chain partners (Sheth & Parvatiyar, 1995: 399). Effective relationship marketing, according to relationship marketing theory, is the outcome of certain aspects of collaborative relationships that constitute successful relationship exchanges (Hunt et al., 2006). Collaboration has a number of advantages, including risk sharing, resource acquisition, decreased transaction costs, increased productivity, and greater performance. Collaboration can also help organizations avoid the inherent costs of entering and monitoring new markets, as well as the risks associated with having to internalize non-core activities. (Kim et al., 2018).

The importance of collaboration for maritime logistics can be seen in the definition of supply chain management (SCM), which is a broader concept than logistics. The Council of Logistics Management defines SCM as:

Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion and all logistics management activities. Importantly it also includes co-ordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies.

According to Mentzer et al. (2001) effective SCM consists of a number of partnerships and thus SCM requires partners to establish and maintain long-term relationships. As Izquierdo et al. (2005: 234) explained, the purpose of supplier-customer relationship is to create and share value. To create and share value in the supply chain, an integrated service provider must collaborate with its suppliers and other connected partners (Matthyssens & Vandenbempt, 2008). Interaction processes are important either as an approach to coping with existing interdependencies or as a means of creating new interdependence. Therefore, strategic interaction between different parties is critical to creating value in a service supply chain. Strategic

interaction represents continuous and reciprocal actions between the parties in the service supply chain for the purpose of communicating, coordinating and adapting the activities (Song et al., 2016: 611).

As a most known horizontal collaboration practice, liner shipping companies have a long history of collaboration, the most egregious example being their price-fixing agreements in the framework of the liner conference system. Another form of horizontal collaboration is strategic alliance. Strategic (horizontal) alliances promote cooperation in the employment and usage of ships on specific routes, including ship type/size, sailing schedules and itineraries, cooperative terminal use, and worldwide container co-ordination (Panayides & Wiedmer, 2011). Lun et al. (2009) define a liner shipping network as a vertical form of collaboration in the liner shipping industry in which players such as intermodal service providers, container management service providers, and container terminal operators pool resources and develop mutually beneficial strategies. Seo et al. (2015) conducted a study to establish supply chain collaboration (SCC) as an intermediary supply chain process in container maritime logistics. They found that the suggested model of SCC is statistically consistent, trustworthy, and valid. The factors that underpin SCC between ports and port users such as shipping lines, inland transport companies, freight forwarders, ship management companies, and third-party logistics companies were identified as information sharing, knowledge creation, goal similarity, decision harmonization, and joint supply chain performance measurement. Chou et al. (2018) investigated the relationship between competitive capabilities, such as flexibility and collaboration, and relationship quality, as evaluated by trust, dependency, and commitment, between logistics service providers (LSPs) and their customers. The findings indicated that both flexibility and collaboration have a beneficial effect on trust and dependency.

CHAPTER FOUR

RESEARCH DESIGN

4.1. THE SCOPE, THE RESEARCH QUESTION, AND THE AIM OF THE RESEARCH

This study focuses on relationship marketing strategies performed in the maritime logistics industry. The Turkish maritime logistics industry is the main research area of this study because of its growing geographic and strategic significance as a critical logistics hub between Europe and Asia. Thus, the Turkish maritime logistics industry's empirical analysis may have important strategic implications for maritime logistics research.

Shipping, port operations, and freight forwarding are all part of maritime logistics, which is defined as a set of maritime transport processes engaged in the entire logistics flows (Lee & Song, 2010). We focus on the supplier-customer relationship between container shipping lines which offer shipping service and freight forwarders. The study does not include other parties of the maritime logistics network, such as ports and terminal operators.

Relationship marketing is “attracting, maintaining and, in multi-service organizations, enhancing customer relationships” (Berry, 2002). To ensure this, managers must develop close and long-term oriented business relationships with their customers. Increasing customer loyalty is one of the most common outcomes of adopting a relationship marketing strategy, according to Palmatier et al. (2006). Thus, when discussing the impacts of implementing a relationship marketing program in the maritime logistics industry, one must examine its impact on customer loyalty. A strategy designed to concentrate on one component of the maritime logistics value system may have an impact on other participants in the maritime logistics chain. For example, due to the intermediary role of the freight forwarder, the service operations interaction between the container shipping line and the freight forwarder will affect the service operations interaction between the freight forwarder and the shipper both positively or negatively. While freight forwarders develop relationships with container shipping lines, they should be keenly aware of how these relationships will affect their

own working relationships with shippers. That's why freight forwarder businesses should cooperate with their main supplier to recovery and enhance the services they offer. Developing a long-term relationship and collaboration with the main supplier has very meaningful effects on freight forwarder business. So, the main research question is “What are the impacts of a container shipping line’s relationship marketing strategies on loyalty and collaboration of a freight forwarder”. In this research, relationship quality is handled as a mediator between relationship marketing strategies and freight forwarder’s loyalty and collaboration. Sub research questions are as follow:

- (1) How do the relationship marketing strategies form in the maritime logistics industry?
- (2) What are the determinants of relationship quality between exchange partners in the maritime logistics industry?
- (3) What are the freight forwarders’ perceptions of the relationship marketing strategies of container shipping lines?
- (4) How do relationship marketing strategies of container shipping lines affect loyalty of freight forwarders?
- (5) How do relationship marketing strategies of container shipping lines affect collaboration of freight forwarders?
- (6) How does relationship quality among freight forwarders and container shipping lines mediates this relationships?

Long-term business relationships provide many potential benefits for maritime logistics partners. Therefore, this study aims to examine impacts of relationship marketing strategy applications of container shipping lines on loyalty and collaboration of freight forwarders.

4.2. HYPOTHESES DEVELOPMENT

Under this title, developed theoretical model based on related marketing theories and studies in the literature is presented in order to understand the framework of this study. The hypotheses developed in accordance with the conceptual model of the study are also presented on the basis of the literature.

4.2.1. Foundational Theoretical Models

This study adopts a relationship marketing approach to the maritime logistics industry and chooses maritime logistics partners as the main research unit. Therefore, the main theoretical framework of the study makes an effort to link the several customer-oriented and relationship oriented marketing theories to the maritime logistics concept. Maritime logistics industry is a service industry, so its main product is the service, whose quality can be perceived subjectively, depending on the relationship between a company and its customers (Shin et al., 2018). Main actors that have a relational exchange in the maritime logistics industry are business companies such as container shipping lines, freight forwarders, ports and shippers (export/import company). Thus, service marketing and B2B marketing approach is utilized in this study.

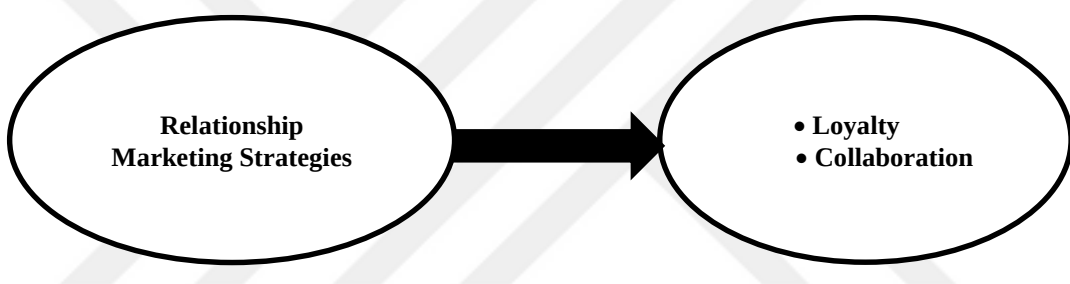
According to Bagozzi (1975), there are three main exchange types; restricted (reciprocal relationships between two parties), generalized (univocal and reciprocal relationships among at least three partners), and complex exchange (a system of mutual relationships between at least three parties). Within the scope of maritime logistics, the movement of the goods is carried out by a triad of maritime logistics service provider; the shipper (cargo owner), freight forwarder (service provider) and the shipping line (ocean carrier) (Altuntas Vural et al., 2019: 29). The relationship between container shipping lines, freight forwarder and shipper is subject of complex exchange. Each player in maritime logistics is involved in at least one direct transaction, although the entire maritime logistics system is organized by a network of interconnected relationships. Therefore, this study focus on relational exchange between container shipping line and freight forwarder which are the two most important actor of maritime service triad by taking into account the relationship between freight forwarder and shipper.

Relationship marketing has ten distinct forms under four categories, such as supplier partnership (good suppliers and service providers), lateral partnerships (competitors, non-profit organizations and the government), and buyer partnerships (ultimate customers, intermediate customers) (Morgan and Hunt (1994). The focus of this study is supplier partnership. As if we regard freight forwarder as the focal firm in

the context of maritime service triad, there will be a supplier partnership with container shipping lines.

The literature on relationship marketing provides a theoretical foundation for comprehending supplier-customer relationships. These academic studies prove that relationship marketing strategies lead to superior relationship outcomes such as loyalty and collaboration. Thus, the foundation of the theoretical model established on relationship of those constructs (Figure 16). Both business managers and academics widely accepted that strong customer relationships have significant effect on loyalty and collaboration.

Figure 16: The Simplified Theoretical Model of the Study

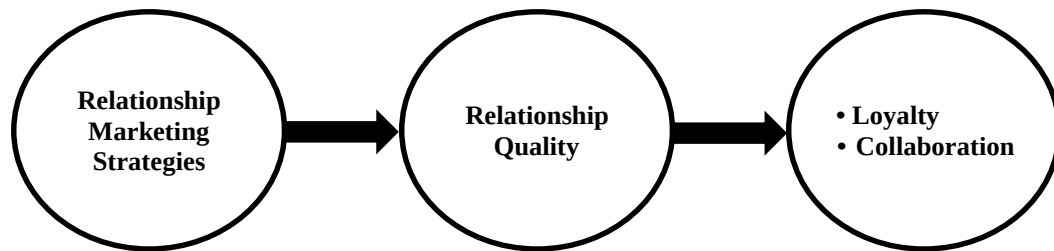


Source: Author

According to Commitment-trust theory (Morgan & Hunt, 1994), the presence of relationship commitment and trust is central to successful relationship marketing. When both commitment and trust exist between exchange partners, they produce outcomes that promote efficiency, productivity, and effectiveness. The theory proposes that cooperation arises directly from both relationship commitment and trust. The authors theorize that cooperation, one of the outcomes of trust and relationship commitment, promotes relationship marketing success. In cases of buyer-seller bargaining, Schurr and Ozanne (1985) see that trust is central to the collaborative problem-solving and constructive dialogue process. They also find the trust to lead to a higher level of loyalty in the bargaining partner. Based on the previous research examples and the commitment-trust theory of RM, in this research, relationship quality (trust and commitment) is handled as a mediator between relationship marketing

strategies and customer loyalty and collaboration. The theoretical model was extended as can be seen in Figure 17.

Figure 17: The Extended Version of the Main Theoretical Model



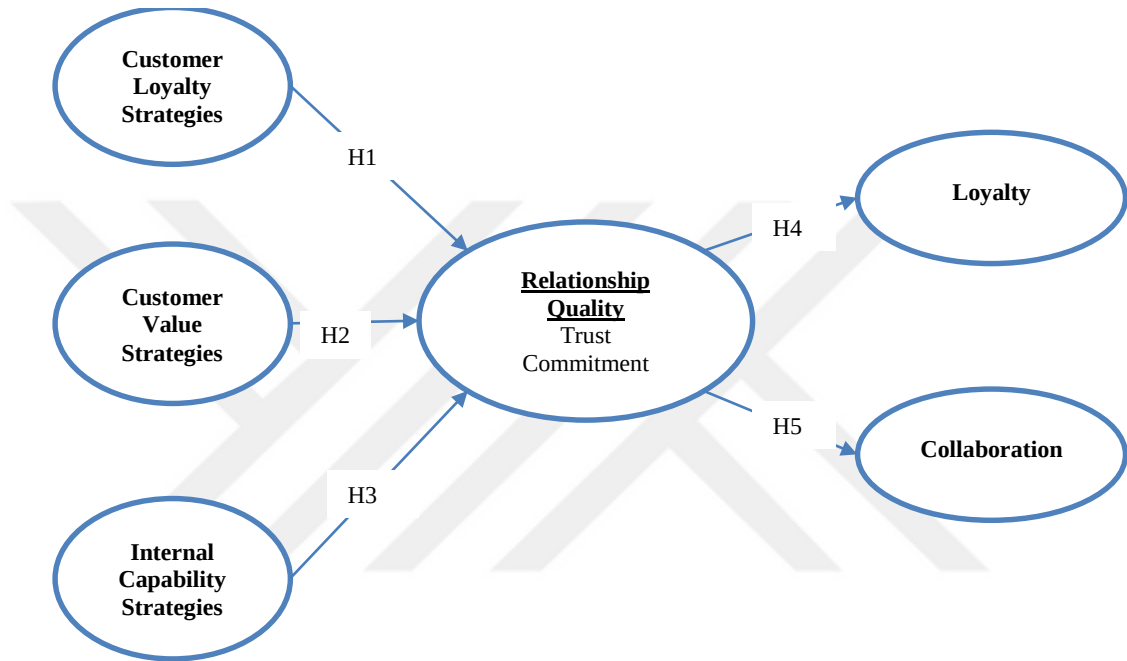
Source: Author

Relationship marketing strategies consist of three important dimensions (Sanzo & Vázquez, 2011); attaining long-term customer loyalty (labelled as customer loyalty in the scale) (Berry, 1983; Chaston et al., 2000; Chaston, 1998; Christopher et al., 1991; Raval & Grönroos, 1996), obtaining personal information about each customer to analyze customer needs and the value customers gain from the firm's services (labelled as customer value) and internal capabilities of the firm (Grönroos, 1995; Sanzo & Vázquez, 2011). Relationship quality operationalized as a two dimensional construct; commitment and trust (Chou et al., 2018; Morgan & Hunt, 1994; Shin et al., 2018).

In the context of supplier-customer relationships, according to Chu and Wang (2012: 81) resource dependence theory (RDT) indicates that customers (shippers) may develop logistics outsourcing relationships to manage their dependence on supplier (3PLs). Accordingly, the authors argue that factors related to transaction costs and dependence may lead to the development of close logistic outsourcing relationships. We assume same impacts on the complex relationships of maritime logistics partners. First, on the basis of Commitment-Trust theory, it is assumed that collaboration of both container shipping line and freight forwarder is significantly affected by relationship quality among them. Second, grounded on RDT, it is assumed that collaboration of FF and shipping line may reduce FF's dependence to shipping line. There are customer-supplier-supplier relationships between maritime service triad.

Therefore, success of the FF's customer relationship marketing program mostly depends on shipping line's service provided. This dependence may lead to develop collaborative relationship between FF and shipping lines. Thus, the final research model was developed as can be seen in Figure 18.

Figure 18: Developed Research Model of the Study



Source: Author

4.2.2. Hypotheses Concerning the Research Model Constructed

Based on the constructs developed in previous section, the hypotheses are established in this subsection in three phases. In the first phase, impact of RM strategies on relationship quality between maritime logistics partners are hypothesized. After that, the second phase hypothesizes the impacts of relationship quality between maritime logistics partners on customer loyalty. Third phase hypothesis the impacts of relationship quality between maritime logistics partners on collaboration.

4.2.2.1. The Impact of Relationship Marketing Strategies on Relationship Quality

Long-term inter-organizational relations between supply chain partners would arguably lead to improved performance in the supply chain and greater potential benefits for all parties in the supply chain (Johnson, 1999; Lee et al., 1997; Panayides & So, 2005a). However, the current literature does not adequately address the potential impacts of implementing relational change that make long-term relations possible in the supply chain (Panayides & So, 2005a). The marketing strategies applied by firms are the most important indicators of their activities' relationship oriented. In the supply chain context, Sanzo and Vázquez (2011) propose RM strategies scale that focuses on the type of strategy, organizational resources and capabilities that can lead to relational change. They express that these three dimensional customer-oriented relationship marketing strategies construct relate directly to primary and support activities in the value chain framework, including marketing and sales, service, firm infrastructure, human resource management, and technology development.

Firms carry out a set of strategies to create long-term customer loyalty such as relationship pricing, loyalty programs, enhancing logistics service capability, communication, and core service strategy. For instance, customers are given a price incentive to carry out most or all of their business with a single supplier (Berry, 2002). In the container shipping context, Balci et al. (2019) examined the impact of relational bonding strategies on the satisfaction and loyalty of customers. They found that financial bonding strategies (e.g. deferred payment, discount, local expenses) have the most significant direct effects on customer satisfaction and the strongest total effects on customer loyalty.

Relationship quality is shown as one of the most important mediating variables in relational changes in RM literature (Palmatier et al., 2006). Based on this understanding, we suggest that the effect of RM strategies on customer loyalty is realized through trust and commitment, two important dimensions of relationship quality. For this reason, we think that RM strategies have a direct effect on trust and commitment. Loyalty programs, one of the RM strategies, seek to establish direct and

personal relationships with the customer, which in turn encourages the customer's commitment to the supplier, followed by customer. A customer's perceived value, reflecting the ratio between perceived benefits and perceived sacrifices, relates to core products as well as supporting services, plus relationship benefits (e.g. safety, credibility, security) that can enhance trust in the supplier and improve customer loyalty (Sanzo & Vázquez, 2011: 55). The current literature shows that service providers use RM strategies such as personal communication, preferential treatment and rewarding to establish a long-term relationship with their customers. These RM strategies contribute to the development of customer perception about the service provider's RM orientation (Mishra & Vaithianathan, 2015: 123). If customer believes to receive higher value, its commitment to relationship with suppliers will be increased.

According to Palmatier et al. (2006), RM strategies (e.g. expertise of vendor, communication, and relationship investment) have influence on the relationship quality. The empirical findings of their study show that expertise and communication are the most effective relationship-building strategies across all elements of relationships. Ndubisi (2012), analyzed the direct and indirect effects of mindfulness based marketing practices of customer orientation, communication and competence on relationship quality in small healthcare organizations in Malaysia, by drawing from the mindfulness theory. Similar to the findings of Palmatier et al. (2006), he found that customer orientation, communication and competence are influential factors of relationship quality.

Moore and Cunningham (1999), aimed to gain a better understanding of logistics relationships by determining whether differences in social exchange behavior exist between alliance and transactional relationships. They also examined whether differences in social exchange behavior exist between effective and less effective logistics relationships. According to findings of the study, shippers in effective logistics relationships perceive higher levels of trust, equity, and commitment, and lower levels of conflict and opportunism than that perceived by shippers in less effective relationships. It appears shippers in alliances are more committed to maintaining relationships and trust their third party partners more than that perceived by shippers in transactional relationships. These findings suggest that trust and

commitment are major distinguishing social exchange behavior characteristics of logistics alliances. Panayides and So (2005a) investigated the impact of relational orientation in LSP–client relationships and their ultimate impact on supply chain effectiveness and performance. Their relationship orientation scale includes the items of communication, empathy, trust, shared value, reciprocity and bonding. They found that improvement in supply chain effectiveness (includes RM strategies such as fulfil promises, development of customer data base, adoption of CRM technologies) have strong positive influence on supply chain performance. Their findings suggest that relationship orientation is extremely beneficial in the context of supply chains.

As these relationship marketing strategies are believed to have an impact on the maritime logistics partners' relationship quality, the hypotheses for this analysis are listed as per below:

H1: The relationship quality between freight forwarder and container shipping line is significantly influenced by container shipping line's customer loyalty strategies in the maritime logistics industry.

H2: The relationship quality between freight forwarder and container shipping line is significantly influenced by container shipping line's customer value strategies in the maritime logistics industry.

H3: The relationship quality between freight forwarder and container shipping line is significantly influenced by container shipping line's internal capability strategies in the maritime logistics industry.

4.2.2.2. The Impact of Relationship Quality on Loyalty

Palmatier et al. (2006) argued that relationship quality are customer-oriented relational mediators in relationship marketing models. Customer loyalty is customer-focused outcomes of relationship quality in their relationship marketing models. Various research in relationship marketing literature has revealed that relationship quality structures have a direct impact on customer loyalty (Jang et al., 2013). Huang (2012) examined the effect of relationship quality on customer loyalty in franchising beverage stores. She found that relationship quality has impact on customer loyalty regarding effectiveness of relationship marketing. According to Schurr and Ozanne

(1985) trust lead to higher levels of loyalty to the bargaining partner. They found that high trust resulted in a more positive attitude towards the current supplier and a more positive attitude towards source loyalty than low trust. In the service industry context, Ndubisi (2007) examined the impact of four underpinnings of RM such as trust, commitment, communication, and conflict handling on customer loyalty in Malaysia banking sector. They demonstrated that these four variables have a significant effect and predict a good proportion of the variance in customer loyalty. Wallenburg et al. (2011) investigated the strength of the relationships between trust, commitment and customer loyalty within the logistics outsourcing relationships between Germany and the United States. They handled customer loyalty as the two dimensional construct; the first dimension retention, and the second dimension referrals. They found that these two customer loyalty dimensions are affected by commitment and trust. While trust does not have a significant direct impact on retention and referrals, commitment has a strong direct impact on both dimensions of loyalty. Yuen et al. (2018) analyzed the intermediary roles of shippers' perceived value, shippers' trust, and transaction cost on the relationship between sustainable shipping practices and shippers' loyalty. They found that shippers' trust has a positive effect on shippers' loyalty to shipping companies. In the context of shipping line-shipper relationships, Jang et al. (2013) examined impact of relationship quality on attitudinal loyalty and behavioral loyalty. They found that trust and commitment have a positive impact on attitudinal loyalty and commitment have a positive effect on behavioral loyalty. Given the theory and evidence of past research on relationship quality and customer loyalty, it is possible to layout the following hypotheses:

H4: The loyalty of freight forwarder is significantly influenced by relationship quality between freight forwarder and container shipping line.

4.2.2.3. The Impact of Relationship Quality on Collaboration

Freight forwarder is intermediary between shipper and container shipping line. They have contractual relationships with these two parties. There are customer-supplier-supplier relationships between these three maritime service actors. As container shipping lines are service providers of freight forwarder, success of the

freight forwarder's customer relationship marketing program mostly depends on container shipping line's service provided. Freight forwarders who want to develop a long-term relationship with their customers tend to collaborate with container shipping lines.

Flynn et al. (2010) defines strategic collaboration as an ongoing partnership to achieve mutually beneficial strategic goals. It comprises mutual trust, increases contract duration and encourages efficient conflict resolution and sharing of information, rewards and risks. Current studies have identified many benefits of collaboration such as knowledge sharing and creation, combinations of complementary capabilities, and operational efficiency. For example, through collaboration, firms are able to access complementary resources in partner organizations and leverage these resources to develop their core capabilities (Chou et al., 2018: 557). The overarching logic of collaboration is that more can be gained by "working together to jointly achieve greater success than can be attained in isolation" (Daugherty et al., 2006: 61; cited by Grawe et al., 2012: 50).

Commitment-Trust Theory implies that cooperation arises directly from both relationship commitment and trust. In particular, cooperation is the most important outcomes of the relationship quality between partners that affects relationship marketing success (Morgan & Hunt, 1994; Palmatier et al., 2007). Palmatier et al. (2006) reviewed empirical research in relationship marketing within a meta-analytical framework. They found that relationship quality is customer-oriented relational mediators in relationship marketing models and cooperation is dyadic outcomes of relationship quality in their relationship marketing models. Both commitment and trust encourage a relational bond between suppliers and customers that facilitates efficient collaboration (Chen et al., 2011; Gounaris, 2005). In buyer-seller bargaining situations, Schurr and Ozanne (1985) proposed the notion that trustworthiness plays a key role in making a seller's tough bargaining strategy successful. They found that a seller's expected trustworthiness-plus- toughness in bargaining led to higher levels of buyer-seller cooperation. Wu et al. (2008) investigated the impacts of inter-organizational relationship quality between ocean carriers and shipper on their cooperation intention. They examined trust as two dimensional construct; perceived

cognition-based and affect-based trusts and found that these factors are the fundamental factors of inter-organizational cooperative intention.

According to Resource Dependence Theory, the company is an open system dependent on unexpected situations in the external environment. The RDT perspective on inter-organizational relationships shows that collaborative inter-organizational relationships are a way of acquiring resources, and reducing uncertainty and dependence (Pfeffer & Salancik, 1978). According to theory, managers can act to reduce environmental uncertainty and dependence. It also suggests that a higher level of dependence often leads to a closer inter-organizational relationship to manage this dependency (Chu & Wang, 2012: 81). Based on this theory, it can propose that freight forwarder's cooperative relationships with container shipping lines can lead to control container shipping lines' resources in an attempt to manage uncertainty and dependence of freight forwarder. This relationship can lead to higher logistics performance and greater supply chain efficiency between maritime logistics partners. According to Tellefsen and Thomas (2005), the existence of dependence occurs when dependent firms receive critical benefits from the relationship and/or cannot easily find alternative suppliers. Since the maritime logistics industry consists of a small number of large container shipping lines as a result of merger and acquisition, there are not many carrier alternatives, especially on certain routes.

As the customer relationship marketing strategies and relationship quality of maritime logistics partners are believed to affects FFs' collaboration intention to achieve mutually beneficial strategic goals, the hypothesis for this analysis are listed as per below:

H5: The collaboration intention of freight forwarder is significantly influenced by the relationship quality between freight forwarder and container shipping line.

4.3. DATA ANALYSIS METHOD

In order to empirically investigate the proposed conceptual relationship model, this study employ a quantitative approach and perform structural equation modelling (SEM) by using AMOS 25 Graphics program. The purpose of the conducting SEM is to explore perception of customer and to validate the proposed relationships in the

maritime logistics field. SEM is mostly used data analysis method in supplier-customer relationship studies. For instance, SEM was conducted to measure the influence of relational bonding strategies on customer satisfaction and loyalty in container shipping (Balci et al., 2019), to find if it possible to predict RM practices by Big Five personality traits by using a sample of logistics service customer (Caliskan, 2019), to examine the effects of relationship orientation in the logistics service provider–client interaction (Panayides & So, 2005a), to measure the influence of customer relationship marketing on attitudinal loyalty toward the main supplier in the supply chain context (Sanzo & Vázquez, 2011) etc.

Structural equation modeling is a viable method for analyzing hypotheses as it allows the analysis of more than one relationship at the same time and provides measures of overall model fit (Panayides & So, 2005a). Another strength of this analysis method is that it explains the significance of each of the relationships between variables (Kline, 2011).

4.4. DEVELOPMENT OF THE RESEARCH INSTRUMENT

The survey instrument and measurement constructs utilized in this research was developed based on the literature review and the qualitative study. The relationship marketing strategies (RMS) construct was developed based on both literature review and interview with sector experts. It is measured by factors indicating the container shipping lines' relationship marketing strategies to develop long-term relationship with customer based on three dimensions proposed by Sanzo and Vázquez (2011). The construct relationship quality (RQ) is measured by factors indicating the trust (TR) and commitment (CT) of freight forwarder to container shipping line. Relationship outcomes (RO) is measured by factors indicating loyalty (LOY) and collaboration (COL) of freight forwarders. In this research, the measurement scale was adapted to customer. The questionnaire was designed for the customer (freight forwarder) side of relationship. Table 18 shows the selected constructs and items for the research scale for freight forwarders. All the items were assessed on a five-point Likert-type scale. The scales were anchored by “1-strongly disagree [...] 5-strongly agree” for all the constructs.

Table 18. Construct Measurement

Scale	Code	Items	Source
RELATIONSHIP MARKETING STRATEGIES (RMS)	CL1	The container shipping line gives priority to long-term customer loyalty.	Sanzo and Vazques, 2011; derived from the qualitative study
	CL2	The container shipping line practices relationship pricing such as discounts on freight rates, deferred payment, and flexibility in demurrage free time.	
	CL3	The container shipping line improves the core product by means of added services or loyalty programs.	
	CL4	The container shipping line provides timely and reliable information to us.	
	CL5	The fulfillment of promises is a key objective of the container shipping line.	
	CV1	The container shipping line cares about our perceived value, that is our perceived benefits and costs resulting from the provided service.	
	CV2	The container shipping line gives priority to customers with high profitability.	
	CV3	The container shipping line fosters personal and direct contacts between all-level staff and us with the aim of prompt response to our operational and commercial demands.	
	IC1	The container shipping line has sufficient online services (operational/documentation process, online reservation, online pricing, online vessel program, container tracking service, etc.).	
	IC2	The container shipping line widely employs the new information and communication technologies (CRM technologies) to develop close and direct bonds.	
	IC3	The container shipping line's organizational systems, structure, and procedures are specifically tailored to meet our needs.	
	IC4	The container shipping line's procedures are specifically designed to foster service excellence.	
	IC5	The container shipping line analyzes in depth the reasons for customer dissatisfaction (or customer desertion).	
	IC6	The sense of belonging of the container shipping line's employees to their company is high.	
	IC7	Staff stability is an important objective for the container shipping line.	
	IC8	Coordination between the container shipping line's staff at all levels meets our expectations.	
	IC9	The container shipping line's staff willing to meet our requirements (e.g. changing needs).	
	IC10	When we forward our problems and service feedback to the container shipping line's employees, they find solutions for them.	
RELATIONSHIP QUALITY (RQ)	TR1	The container shipping line keeps their promises to my company.	Shin et al., 2018.
	TR2	The container shipping line is genuinely concerned that our business succeeds.	
	TR3	The container shipping line keeps our best interests in mind.	
	TR4	The container shipping line considers our welfare as their own.	
	TR5	The container shipping line is trustworthy.	
	CT1	We are very committed to relationship.	Shin et al., 2018.
	CT2	We intend to maintain indefinitely.	
	CT3	We continue working with the container shipping line.	
	CT4	We genuinely enjoy our relationship with the container shipping line.	
	CT5	We like being associated with the container shipping line.	

Scale	Code	Items	Source
RELATIONSHIP OUTCOMES (RO)	L1	My company considers the container shipping line as our first choice.	Yuen et al., 2018.
	L2	My company would recommend the container shipping line's services to other companies.	
	L3	My company would encourage others to use the service of the container shipping line.	
	L4	My company has positive things to say about the container shipping line.	
	C1	The container shipping line exploits unique opportunities in the market with us.	Chou et al., 2018.
	C2	We find synergistic ways to do business together.	
	C3	The container shipping line works together to develop new ideas with us.	
	C4	We continually share proprietary information mutually.	

Source: Author

4.4.1. Structure of the Research Instrument

Based on the conceptual model of the research, a questionnaire was designed. Questionnaire consists of RMS construct, RQ construct, RO construct and directed to FFs.

The questionnaire form starts with a brief explanation. Then, it consists of four sections including questions directed to the respondents. After stating the purpose of the thesis and the people who carried out the study in the explanation, the first part includes profile questions aiming to obtain information about the respondent and the company he works for. The second part includes the directions for the scales and the relationship marketing strategies scale consisting of a total of 18 items. In the third section, there is a scale consisting of 10 items about the two dimensions of relationship quality; trust and commitment. In the last part of the study, scales consisting of 8 items for customer loyalty and collaboration were included.

4.5. PRE-TESTING

Before proceeding to the main data collection stage, the designed questionnaire was pre-tested. Pre-tests was conducted in order to test the clarity of the questions in the created questionnaire, their scope, whether there are expressions (i.e. items) with the same meaning and the appropriateness of the order of the questions. The pre-test

process of this research includes the qualitative (expert opinion) and quantitative (pilot test) processes.

4.5.1. Qualitative Pre-Testing

Pre-testing a survey should be done by sending the "final" questionnaire to three types of people: colleagues, industry experts, and target respondents (Forza, 2002). The questionnaire was pre-tested with 6 colleagues (expert in marketing and logistics), 2 industry expert (at least 15-year experience in the maritime logistics industry), and 3 freight forwarder personnel (each from the different management level of organization) to ensure that the questions in the questionnaire form are easily interpretable. Pretest participants were asked to critique the questionnaire for readability and ambiguity, and their critics were used to modify the questionnaire before the final version was mailed to potential respondents. The pre-test group was asked to evaluate by considering the following criteria (Forza, 2002);

- (1) Are the instructions clear?
- (2) Are the questions understandable?
- (3) Did you have trouble understanding what kind of answers are expected or responding to questions asked?

As a result of the evaluation of the pre-test group, it was determined that an item (CL5) in the RMS scale had the same meaning as an item (TR1) in the trust scale. For this reason, the item in the RM scale was extracted from the scale. Since this item is an essential expression of the trust scale, it is left as it is in the trust scale. An item (CL3) is modified by adding words "such as priority in shipment and availability of equipment" to current sentence. Loyalty programs can take several forms according to characteristics of industries. Experts emphasized that giving examples to loyalty programs can have a positive impact on understanding what kind of response is desired. In the same item, the word 'product' is replaced by the word 'service'. Since the main product in container transportation is sea transportation service, it was deemed appropriate to make such a change.

4.5.2. Quantitative Pre-Testing

Evaluating whether there are any problem-causing elements in terms of interviewers and respondents conducting the survey and determining the causes of problems will be achievable only with a pre-test (pilot test) conducted prior to the survey's implementation (Altunışık, 2008). Researches performs a small pretest sample (for example, 15 units) to test the contact-administration protocol, to collect data to make an exploratory assessment of measurement quality collect data and to obtain information that will better describe the sample and the adequacy of the measurements related to the sample. Performing a preliminary analysis of the data by conducting a pilot test provides the following benefits to the researcher (Forza, 2002);

whether the answers to certain questions are too concentrated due to the choice of scale; whether the content of answers differs from what was expected; and whether the context modifies the appropriateness of questions (for example, a question can be meaningful for B2B companies but not for B2C companies, or can be appropriate for medium-size companies but not for very small or large companies).

For preliminary statistical analysis, we conducted pilot-test process with convenient sample of 50 randomly selected respondents from freight forwarder companies and received 23 usable responses. According to the obtained questionnaires, the data were evaluated and subjected to reliability tests (Table 19).

Table 19: Reliability of RMS scale

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.930	0.928	17

Source: Author

Since the scale of relationship marketing strategies is created from different sources, factor structures need to be examined. For this reason, exploratory factor analysis (EFA) test was applied to the collected data. KMO's test of sample adequacy was determined to be 0,632 and Barlett's test of sphericity was found to have a 0.000

significance level (Table 20). In other words, the scale is appropriate for factor analysis.

Table 20: KMO and Bartlett's Test of RMS scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.632
Bartlett's Test of Sphericity	Approx. Chi-Square	342.987
	df	136
	Sig.	0.000

Source: Author

Feedback was used to review scales by changing item statements or adding items. Table 21 presents the revised construct measurement after qualitative and quantitative pre-testing process. As mentioned before only item CL5 deleted from scale.

Table 21. Revised Construct Measurement

Scale	Code	Items	Source
RELATIONSHIP MARKETING STRATEGIES	CL1	The container shipping line gives priority to long-term customer loyalty.	Sanzo and Vazques, 2011; derived from qualitative study
	CL2	The container shipping line practices relationship pricing such as discounts on freight rates, deferred payment, and flexibility in demurrage free time.	
	CL3	The container shipping line improves the core service by means of added services or loyalty programs such as priority in shipment and equipment availability.	
	CL4	The container shipping line provides timely and reliable information to us.	
	CV1	The container shipping line cares about our perceived value, that is our perceived benefits and costs resulting from the provided service.	
	CV2	The container shipping line gives priority to customers with high profitability.	
	CV3	The container shipping line fosters personal and direct contacts between all-level staff and us with the aim of prompt response to our operational and commercial demands.	
	IC1	The container shipping line has sufficient online services (operational/documentation process, online reservation, online pricing, online vessel program, container tracking service, etc.).	
	IC2	The container shipping line widely employs the new information and communication technologies (CRM technologies) to develop close and direct bonds.	

Scale	Code	Items	Source
	IC3	The container shipping line's organizational systems, structure, and procedures are specifically tailored to meet our needs.	
	IC4	The container shipping line's procedures are specifically designed to foster service excellence.	
	IC5	The container shipping line analyzes in-depth the reasons for customer dissatisfaction (or customer desertion).	
	IC6	The sense of belonging of the container shipping line's employees to their company is high.	
	IC7	Staff stability is an important objective for the container shipping line.	
	IC8	Coordination between the container shipping line's staff at all levels meets our expectations.	
	IC9	The container shipping line's staff is willing to meet our requirements (e.g. changing needs).	
	IC10	When we forward our problems and service feedback to the container shipping line's employees, they find solutions for them.	
RELATIONSHIP QUALITY	TR1	The container shipping line keeps their promises to my company.	Shin et al., 2018
	TR2	The container shipping line is genuinely concerned that our business succeeds.	
	TR3	The container shipping line keeps our best interests in mind.	
	TR4	The container shipping line considers our welfare as their own.	
	TR5	The container shipping line is trustworthy.	
	CT1	We are very committed to relationship.	
	CT2	We intend to maintain indefinitely.	
	CT3	We continue working with the container shipping line.	
	CT4	We genuinely enjoy our relationship with the container shipping line.	
	CT5	We like being associated with the container shipping line.	
RELATIONSHIP OUTCOMES	L1	My company considers the container shipping line as our first choice.	Yuen et al., 2018
	L2	My company would recommend the container shipping line's services to other companies.	
	L3	My company would encourage others to use the service of the container shipping line.	
	L4	My company has positive things to say about the container shipping line.	
	C1	The container shipping line exploits unique opportunities in the market with us.	Chou et al., 2018
	C2	We find synergistic ways to do business together.	
	C3	The container shipping line works together to develop new ideas with us.	
	C4	We continually share proprietary information mutually.	

Source: Author

4.6. SAMPLING

All Turkish organizations that provide freight forwarding services were chosen as the general entirety of the survey. A sample frame was created by identifying Turkish firms listed in the UTIKAD (Association of International Forwarding and

Logistics Service Providers) membership. Also, the respondent's position in the company is important while selecting the sample. The respondent representing the freight forwarder should have a direct relationship with container shipping lines. Managers, customer representatives, sales representatives, and marketing specialist were selected as key informants because they are usually knowledgeable of the relationships with container shipping lines. At least 3 individuals were tried to be reached in each organization level of each freight forwarder company.

Considering that there are 6 variables in the research model, it is seen that the sample size of the research meets the minimum sample size criteria of Stevens (1996: 72) with fifteen (15) subjects per independent variable and Tabachnick and Fidell (2007: 123) $N > 50 + 8M$ (M =number of independent variables).

4.7. DATA COLLECTION

Relationship marketing strategies was measured by adopting a scale developed by Sanzo and Vazques (2011) and interview with sector experts. The scale, which was tested in a follow-up study and found to be valid and reliable (Sanzo and Vazques, 2011), encompasses all the commonly cited strategies that are regarded as essential in the formation of customer relationships.

The present study focuses on the supplier-customer relationship; the relationship between container shipping line and freight forwarder. Other maritime logistics network members such as ports, terminal operators, or inland hauliers are not within the scope of the study. In accordance with the relationship quality literature, we focus on trust and commitment as the key components of relationship quality.

The final questionnaire (Appendix 2-3) was distributed to various firms using the Google Forms electronic platform with the aim of assessing the relationship marketing strategies of container shipping lines. Each respondent had to consider mostly used container shipping line in ocean carriage service and then evaluated RM strategies, relationship quality, loyalty and collaboration in the partnership.

To investigate the interaction among the constructs, we proposed a structural equation model to understand the influence of relationship marketing strategies of suppliers on loyalty and collaboration intention of customer by proposing supply chain

relationship quality as mediating variables. The data were obtained through a survey of 208 managers and personnel of Turkish companies in the freight forwarding sector. The businesses are based in Turkey and they carry diverse types of cargo.

In this study, confirmatory (or theory test or explanatory) questionnaire research was conducted. Confirmatory survey research occurs when knowledge of a phenomenon is expressed theoretically using well-defined concepts, models, and propositions (Forza, 2002). A conceptual model was developed within the scope of the study (see Figure 18 in Chapter 4). Data collection for this study was carried out to test the adequacy of the hypothetical relationships and validity boundary between the conceptual model variables developed.

The created research design must be tested before implying final questionnaire. According to (Forza, 2002), the questionnaire should be sent to three types of individual in the study's target audience (colleagues, industry experts, and target respondents) during the pretest phase. Colleagues help verify the fit of the questionnaire. Experts help avoid excluding clear and important questions for the purposes of the study. Finally, the questionnaire should be sent to the respondents in the target audience in order to receive feedback on unexpected situations that may affect data collection.

CHAPTER FIVE

TESTING THE IMPACT OF RELATIONSHIP MARKETING STRATEGIES ON LOYALTY AND COLLABORATION OF FREIGHT FORWARDERS

This study uses a questionnaire survey to collect data for empirical analysis using structural equation modeling (SEM). This technique enables researchers to work with a large number of endogenous and exogenous variables, as well as latent variables specified as linear combinations of observed variables. This chapter tests a proposed research model and hypotheses in Chapter 4. Before the empirical analysis, the first section conducts an initial analysis of the data, including descriptive statistics of the participants and scales. The processes of the structural equation model were explained and the research analysis process was carried out according to the specified steps. As Hair et al. (2014) mentioned, regardless of the method used, sample size and missing data can have a significant influence on the results. A total of 208 samples were included in the analysis and this number is sufficient for SEM analysis. There is no missing data in the collected questionnaire forms. Then, item and scale purification process was employed via exploratory factor analysis. After the initial analysis, a causal relationship was evaluated between customer loyalty strategies (CL), internal capability strategies (IC), relationship quality (RQ), loyalty (LOY), and collaboration (COL). SPSS 21.00 for Windows and SPSS AMOS 25 statistical software were used for all analyzes.

5.1. DESCRIPTIVE STATISTICS

Before empirical analysis, this section includes an initial data analysis, which contains descriptive statistics about the data. The first section provides background information on the survey respondent. The second topic addresses descriptive data for relationship marketing strategies, a relationship quality scale, and a relationship outcome scale. The percentage frequency, mean, and standard deviation of each item on the questionnaire for the three scales are included in the statistics.

5.1.1. Descriptive Statistics of Participants

Table 22 presents the respondents' profiles and features as well as those of their organizations. Most of the respondents (55.3%) hold managerial level positions in the organization such as general manager, branch manager, owner, regional director and department director. According to total work experience in logistics sector, most of the respondents (67.8%) have at least 5-year experience. Approximately 77% of respondents have bachelor's degree and those who have master's degree accounted for 17.3%.

Table 22: Profile of Respondents and Their Organizations

Profile of Respondents	F	P	Profile of Respondents	F	P
Position			Total work experience		
Managerial level	115	55.3	1-5	67	32.2
Operational level	38	18.3	6-10	35	16.8
Marketing and sales	55	26.4	11-15	31	14.9
Education level			16-20	32	15.4
High school	4	1.9	≥ 21	43	20.7
Associate degree	8	3.8			
Bachelor's degree	160	76.9			
Master's degree	36	17.3			
Profile of Organizations	F	P	Profile of Organizations	F	P
Number of employees			Operating year		
1-9	20	9.6	1-5	21	10.1
10-49	49	23.6	6-10	67	32.2
50-99	53	25.5	11-20	51	24.5
100-249	53	25.5	>20	69	33.2
>250	33	15.9			
Cargo Volume			Ownership		
1-5000	38	18.3	Pure domestic	118	56.7
5001-50000	90	43.3	Pure foreign	44	21.2
>50000	80	38.5	Domestic/foreign partnership	46	22.1
AggCSL			AggFF		
No	35	16.8	No	98	47.1
Yes	173	83.2	Yes	110	52.9
AggCustomer			AggNone		
No	36	17.3	No	193	92.8
Yes	172	82.7	Yes	15	7.2

Note: F=Frequency; P=Percentage

Source: Author

15.9% of respondents were from large firms. The majority of respondents worked for small and medium-sized businesses. 33.2% of respondents from firms that actively operating more than 20 years. According to cargo volume handled in a year,

most of the respondents are from firms which handle more than 5000 TEU. The rate of respondents from firms that handle more than 50000 TEU is 38.5%. According to their partnership/ownership structure, the majority of respondents come from pure domestic businesses. Number of respondents from pure foreign and domestic/foreign partnership are roughly equal. 92.8% of the respondents stated that their firm has at least an agreement with their supply chain partners such as container shipping line, freight forwarder and customer (exporter/importer). Most of the respondents claimed that their firms had collaboration agreement with their primary suppliers (CSL) and/or customers. In addition, approximately 53% of respondents stated that their firm have collaboration agreement with other freight forwarders.

5.1.2. Descriptive Statistics for Scales

The specifications and components of the measurement constructs (RM scale, RQ scale and RO scale) were identified based on the qualitative study and existing studies in section 4.4. Table 23 presents the descriptive analysis of RMS scale. CV2 and IC7 were perceived as the most strongly agreed items (mean scores: 4.00 and 4.26 respectively). IC5 and IC6 were rated relatively low by respondents.

Table 23: Descriptive Statistics for RMS Scale

Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	SD
CL1	6/2.9	25/12.0	56/26.9	80/38.5	41/19.7	3.60	1.026
CL2	10/4.8	36/17.3	47/22.6	82/39.4	33/15.9	3.44	1.097
CL3	10/4.8	26/12.5	61/29.3	79/38.0	32/15.4	3.47	1.049
CL4	5/2.4	27/13.0	68/32.7	90/43.3	18/8.7	3.43	.909
CV1	14/6.7	48/23.1	78/37.5	52/25.0	16/7.7	3.04	1.030
CV2	7/3.4	12/5.8	43/20.7	57/27.4	89/42.8	4.00	1.083
CV3	17/8.2	42/20.2	64/30.8	66/31.7	19/9.1	3.13	1.095
IC1	8/3.8	29/13.9	58/27.9	84/40.4	29/13.9	3.47	1.021
IC2	8/3.8	25/12.0	68/32.7	87/41.8	20/9.6	3.41	.954
IC3	6/2.9	51/24.5	74/35.6	64/30.8	13/6.3	3.13	.952
IC4	15/7.2	44/21.2	86/41.3	51/24.5	12/5.8	3.00	.990
IC5	28/13.5	49/23.6	71/34.1	47/22.6	13/6.3	2.85	1.110
IC6	21/10.1	50/24.0	79/38.0	44/21.2	14/6.7	2.90	1.059
IC7	0/0	3/1.4	33/15.9	78/37.5	94/45.2	4.26	.775
IC8	8/3.8	33/15.9	88/42.3	59/28.4	20/9.6	3.24	.963
IC9	13/6.3	26/12.5	83/39.9	69/33.2	17/8.2	3.25	.989
IC10	8/3.8	32/15.4	79/38.0	74/35.6	15/7.2	3.27	.940

Source: Author

Table 24 presents the descriptive analysis of RQ scale. The most of the items' mean scores are between 3 and 4 for RQ scale. The highest mean score is 4.24 (CT3) whereas the lowest mean score belongs to TR4 (2.45).

Table 24: Descriptive Statistics for RQ Scale

Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	SD
TR1	4/1.9	26/12.5	74/35.6	83/39.9	21/10.1	3.44	.904
TR2	7/3.4	24/11.5	52/25.0	98/47.1	27/13.0	3.55	.972
TR3	28/13.5	48/23.1	78/37.5	42/20.2	12/5.8	2.82	1.084
TR4	51/24.5	57/27.4	65/31.3	26/12.5	9/4.3	2.45	1.119
TR5	5/2.4	19/9.1	43/20.7	90/43.3	51/24.5	3.78	.996
CT1	10/4.8	27/13.0	63/30.3	81/38.9	27/13.0	3.42	1.028
CT2	5/2.4	4/1.9	57/27.4	91/43.8	51/24.5	3.86	.893
CT3	1/0.5	2/1.0	27/13.0	95/45.7	83/39.9	4.24	.747
CT4	10/4.8	28/13.5	71/34.1	73/35.1	26/12.5	3.37	1.023
CT5	13/6.3	20/9.6	79/38.0	67/32.2	29/13.9	3.38	1.043

Source: Author

Table 25 presents the descriptive analysis of RO scale. The RO scale consist of two dimensions; loyalty and collaboration. L4 and C2 were two items which has the highest mean scores (mean scores: 3.53 and 3.44 respectively). All of the items mean scores were over 3.00 that shows strong agree of respondents. C3 was the item that has lowest mean scores (3.13).

Table 25: Descriptive Statistics for RO Scale

Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	SD
L1	12/5.8	13/6.3	88/42.3	65/31.3	30/14.4	3.42	1.004
L2	13/6.3	19/9.1	85/40.9	65/31.3	26/12.5	3.35	1.019
L3	17/8.2	28/13.5	87/41.8	53/25.5	23/11.1	3.18	1.064
L4	5/2.4	18/8.7	71/34.1	89/42.8	25/12.0	3.53	.900
C1	14/6.7	34/16.3	78/37.5	60/28.8	22/10.6	3.20	1.053
C2	8/3.8	30/14.4	61/29.3	81/38.9	28/13.5	3.44	1.020
C3	22/10.6	31/14.9	75/36.1	59/28.4	21/10.1	3.13	1.118
C4	16/7.7	23/11.1	61/29.3	84/40.4	24/11.5	3.37	1.073

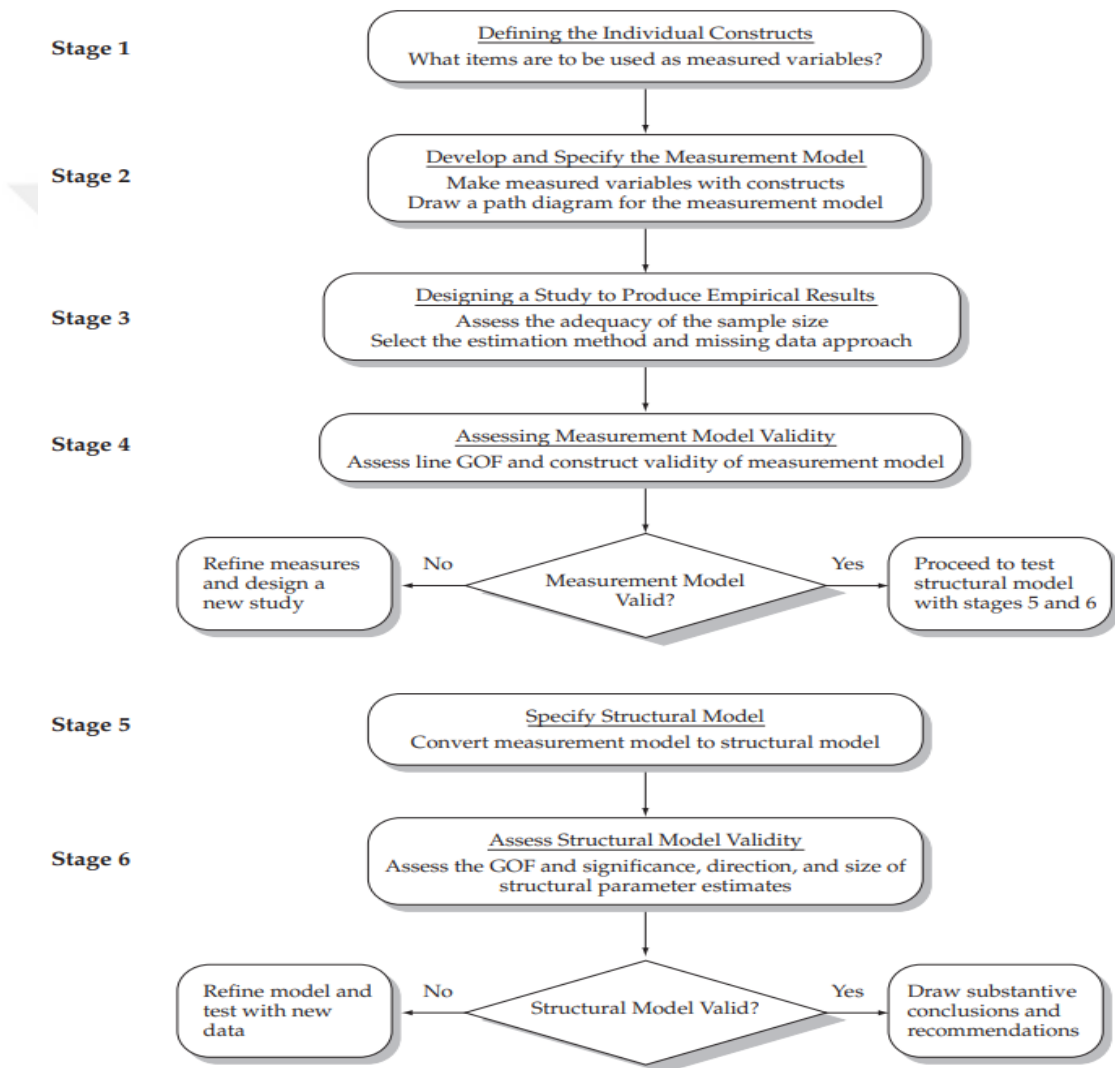
Note: values indicate frequency/percentage

Source: Author

5.2. ANALYSIS PROCESS OF STRUCTURAL EQUATION MODEL

Hair et al. (2014)'s six-stage approach for SEM is used in the study. The detailed method is depicted in Figure 19.

Figure 19: Six-Stage Process for SEM



Source: Hair et al., 2014: 566.

Exploratory factor analysis (EFA) is conducted for item and scale purification before the measurement of construct validity. The reliability and validity of the measurement model's variable were determined using confirmatory factor analysis, as described in Anderson and Gerbing (1988). To begin, CFA is used to determine the

validity of the constructs included in the research model. It focuses on determining the construct validity through the examination of their unidimensionality, reliability, convergent validity, and discriminate validity. After they are confirmed, the structural model between the latent variables must be estimated. Following validation of the suggested model, this study examines the mediating effect of RQ on the relationship between RMS, loyalty and collaboration.

5.3. DATA PREPARATION

Prior to testing measurement models, this section discusses multivariate normality and outliers. It is necessary to preserve multivariate normality in order to employ the most commonly used estimate approach in SEM, maximum likelihood. Few outliers or influential examples can lead to incorrect solutions for practically all standard statistical methods that depend on sample covariance, because the influence function associated with sample covariance is quadratic (Bentler, 2006).

5.3.1. Multivariate Normality

As a default estimate approach, this study used the Maximum Likelihood (ML) method in AMOS 25.00 edition. SEM necessitates multivariate normality, much like other multivariate tests. To employ the SEM's principal estimate approach, maximum likelihood, multivariate normality must be ensured. In the social sciences, it is extremely difficult to meet this assumption. Naturally, bootstrapping is deemed preferable, given the majority of data obtained is not regularly distributed (most of the time). Byrne (2010) also argued for the superiority of bootstrapping. When data provide indications of multivariate kurtosis, conventional Maximum Likelihood estimation may be challenging, and an alternative approach of estimate is likely more suited (Byrne, 2010).

According to (Bentler, 2006) Critical ratio (c.r.) values greater than 5.00 are suggestive of non-normally distributed data in practice. For each item, the skewness of the data was measured to determine the univariate normality of the data set. The data is regularly distributed if the skewness value is 1.0 or below. As a result of EFA

test, several items (CL4, CV1, CV3, IC7, CT4, CT5) were excluded from the scales. Therefore, the normality test was employed after these items were eliminated from the sample. For each item, the skewness of the data was measured to determine the univariate normality of the data set. The data is normally distributed if the skewness value is 1.0 or below. The 13 items of RMS scale were significantly skewed and multivariate kurtosis is also significant (c.r.=9.604). Multivariate normality assessments for RMS scale is shown in Table 26.

Table 26: Assessment of Normality for RMS Scale

Variable	min	max	skew	c.r.	kurtosis	c.r.
IC10	1.000	5.000	-.313	-1.831	-.163	-.477
IC9	1.000	5.000	-.381	-2.228	-.056	-.164
IC8	1.000	5.000	-.018	-.106	-.275	-.804
IC6	1.000	5.000	.018	.106	-.485	-1.417
IC5	1.000	5.000	-.025	-.145	-.691	-2.020
IC4	1.000	5.000	-.101	-.589	-.325	-.951
IC3	1.000	5.000	-.002	-.012	-.623	-1.822
IC2	1.000	5.000	-.481	-2.810	-.034	-.100
IC1	1.000	5.000	-.437	-2.555	-.342	-1.001
CV2	1.000	5.000	-.879	-5.140	.073	.213
CL1	1.000	5.000	-.471	-2.753	-.359	-1.050
CL2	1.000	5.000	-.433	-2.533	-.589	-1.721
CL3	1.000	5.000	-.458	-2.679	-.283	-.826
Multivariate					26.494	9.604

Source: Author

Table 27: Assessment of Normality for RQ Scale

Variable	min	max	skew	c.r.	kurtosis	c.r.
CT3	2.000	5.000	-.590	-3.451	-.111	-.326
CT2	1.000	5.000	-.449	-2.623	.185	.539
CT1	1.000	5.000	-.372	-2.174	-.278	-.812
TR5	1.000	5.000	-.640	-3.742	.019	.056
TR4	1.000	5.000	.323	1.885	-.569	-1.663
TR3	1.000	5.000	-.012	-.071	-.546	-1.596
TR2	1.000	5.000	-.567	-3.313	-.045	-.131
TR1	1.000	5.000	-.281	-1.643	-.179	-.523
Multivariate					10.058	5.692

Source: Author

RQ scale includes 8 items and all of items were significantly skewed. Multivariate kurtosis of RQ scale is also significant (c.r.=5.692) (Table 27). RO scale with 8 items were also significantly skewed (Table 28). However, multivariate kurtosis of RO scale is relatively high (c.r.=11.308). According to univariate kurtosis, all of the RO scale items are under c.r. value of 5.00. Bootstrapping has been used to address those non-normality issues because the data set was frequently skewed negatively, as advised by Byrne (2010).

Table 28: Assessment of Normality for RO Scale

Variable	min	max	skew	c.r.	kurtosis	c.r.
C4	1.000	5.000	-.561	-3.277	-.161	-.471
C3	1.000	5.000	-.256	-1.497	-.452	-1.320
C2	1.000	5.000	-.361	-2.111	-.349	-1.020
C1	1.000	5.000	-.195	-1.142	-.381	-1.115
L4	1.000	5.000	-.351	-2.054	.023	.067
L3	1.000	5.000	-.191	-1.116	-.262	-.765
L2	1.000	5.000	-.300	-1.754	-.028	-.082
L1	1.000	5.000	-.301	-1.761	.155	.453
Multivariate					20.110	11.381

Source: Author

5.3.2. Outliers

The term "outlier" refers to a score that is significantly different from the rest of the data in a given collection (Byrne, 2010). Outliers in univariate data are easily identified by studying the frequency distributions of z scores (e.g., $|z| > 3.00$ indicates an outlier). A multivariate outlier has abnormally high or low values for two or more variables, or its score pattern is aberrant (Kline, 2011: 54). The Mahalanobis distance at $p < 0.001$ was used to determine outliers in this study, as indicated by Tabachnick and Fidell (2012) and Hair et al (2014). According to the cautious criterion ($p < 0.001$), there are three different outliers in the scales: response 6, 53, 68 for the RMS and RQ scale; response 68 for the RO scale (Appendix 4). These three response were removed from the data set and the analyzes continued with the remaining 205 responses.

5.4. ITEM AND SCALE PURIFICATION: EXPLORATORY FACTOR ANALYSIS

Exploratory factor analysis (EFA) to determine to ascertain the extent to which observed variables are related to their latent variables. Because the relationship marketing strategies scale was being used for the first time on the freight forwarder sample, it needed to be validated using exploratory factor analysis (EFA). We used principal component analysis with “direct oblimin” rotation to find the least number of components that explain co-variation. An eigenvalue greater than one indicates a factor. We followed the recommendation of Hair et al. (2014) that items having a factor loading more than 0.4 and a cross-loading difference of less than 0.2 while item excluded from the study.

Table 29: EFA Results of RMS Scale Before Item Delete

RM Strategies	Items	Factor		
		1	2	3
Internal Capability	IC5	.826		
	IC4	.824		
	IC1	.772		
	IC10	.750		
	IC2	.733		
	IC3	.732		
	IC6	.675		
	IC8	.650		
	IC9	.629		
	IC7			.731
Customer Loyalty	CL2		.895	
	CL3		.845	
	CL1		.777	
	CL4	.451	.337	
Customer Value	CV2			.792
	CV3	.536		
	CV1	.450		
Eigenvalues		7.612	1.341	1.171
% of Variance		44.776	7.886	6.890
Cumulative %		44.776	52.662	59.553
Note: Kaiser-Meyer-Olkin Measure of Sampling Adequacy: 0.924, Bartlett's Test of Sphericity: $\chi^2 = 1752.495$ (p= .000), df = 136				

Source: Author

Three latent variables (factor) were identified as expected in literature review (Table 29). Each item loadings are greater than the cut-off criteria 0.4 except CL4 (.336) and IC7 (.256). CL4, CV1, CV3 and IC7 has cross-loading to two factors. Therefore, this items excluded from the scale.

The EFA result of the final RMS scale presented in Table 30. Three factors with eigenvalues greater than 1 account for roughly 66% of the variances. Also, KMO (0.911) and Bartlett's sphericity ($p=.000$) test are proven to be suitable for EFA.

Table 30: EFA Results of RMS Scale After Item Deleted

RM Strategies	Items	Factor		
		1	2	3
Internal Capability	IC5	.808		
	IC4	.808		
	IC1	.778		
	IC10	.731		
	IC2	.718		
	IC3	.702		
	IC6	.644		
	IC8	.636		
	IC9	.627		
Customer Loyalty	CL2		.917	
	CL3		.857	
	CL1		.793	
Customer Value	CV2			.956
Eigenvalues		6.284	1.303	1.015
% of Variance		48.336	10.024	7.807
Cumulative %		48.336	58.361	66.167
Note: Kaiser-Meyer-Olkin Measure of Sampling Adequacy: 0.911, Bartlett's Test of Sphericity: $\chi^2 = 1382.938$ ($p= .000$), $df = 78$				

Source: Author

The same procedure was applied for the RQ scale. Two latent variables (factor) were identified as expected in literature review for RQ scale (Table 31). CT4 and CT5 were excluded from the scale because of cross-loading to two factors in RQ scale. Table 32 presents the EFA results of RQ scale performed after two item deleted.

Table 31: EFA Results of RQ Scale Before Item Delete

Relationship Quality	Items	Factor	
		1	2
Trust	TR4	.950	
	TR3	.915	
	TR2	.773	
	TR1	.767	
	TR5	.604	
Commitment	CT4	.640	.395
	CT5	.419	.403
	CT3		.842
	CT2		.809
	CT1	.459	.485
Eigenvalues		5.555	1.195
% of Variance		55.549	11.952
Cumulative %		55.549	67.501
Note: Kaiser-Meyer-Olkin Measure of Sampling Adequacy: 0.896, Bartlett's Test of Sphericity: $\chi^2 = 1216.235$ (p= .000), df = 45			

Source: Author

Table 32: EFA Results of RQ Scale After Item Deleted

Relationship Quality	Items	Factor	
		1	2
Trust	TR4	.950	
	TR3	.915	
	TR2	.773	
	TR1	.767	
	TR5	.604	
Commitment	CT3		.857
	CT2		.815
	CT1		.480
Eigenvalues		4.405	1.179
% of Variance		55.061	14.737
Cumulative %		55.061	69.798
Note: Kaiser-Meyer-Olkin Measure of Sampling Adequacy: 0.843, Bartlett's Test of Sphericity: $\chi^2 = 868.003$ (p= .000), df = 28			

Source: Author

The EFA analysis was applied for the relationship outcomes scale (loyalty and collaboration). Two latent variables were identified as expected in literature review

for RO scale (Table 33). In terms of relationship outcomes scale, each factor loadings are greater than the cut-off criteria 0.4 and have no cross-loadings.

Table 33: EFA Results of RO Scale

Relationship Outcomes	Items	Factor	
		1	2
Loyalty	L2		.945
	L3		.817
	L1		.753
	L4		.744
Collaboration	C4	.953	
	C3	.817	
	C1	.753	
	C2	.744	
Eigenvalues		4.780	1.053
% of Variance		59.754	13.163
Cumulative %		59.754	72.917
Note: Kaiser-Meyer-Olkin Measure of Sampling Adequacy: 0.882, Bartlett's Test of Sphericity: $\chi^2 = 978.426$ ($p = .000$), $df = 28$			

Source: Author

To summarize, the following variables were extracted as the result of the EFA analysis; CL5, CV1, CV3, IC7, CT4, and CT5. As the number of variables of the customer value construct decreased to one, it is excluded from the research model. A minimum of three variables per factor is recommended by structural equation modeling scholars. It is underlined that in structural equation analyses, even bivariate factors are insufficient to yield significant statistics. In the CFA analysis of the measurement model, there was no significant t-value for the customer value strategies. Therefore, the customer value strategies factor was removed from the model and the conceptual model was modified.

5.5. ASSESSING MEASUREMENT MODEL

5.5.1. Criteria for Assessing Measurement Model

The next step after the measurement model is developed is to evaluate the reliability and validity of the measurement model. Construct validity assesses a scale's

ability to measure what it is intended to measure. Construct validity is composed of multiple sub-dimensions, each of which must be met in order for construct validity to be achieved. Content validity, substantive validity, unidimensionality, reliability, convergent validity, discriminant validity, and predictive validity are all sub-dimensions of construct validity (Garver & Mentzer, 1999). Construct validity is validated when convergent and discriminant validity are supported (Dunn et al., 1994). Table 34 presents the critic value of both validity and model fit indices. The criteria for evaluating the measurement model including overall model fit, unidimensionality, scale reliability, convergent validity and discriminant validity are explained under this section.

Table 34: Validity Criteria of Measurement Models

Validity/Indices		Criteria	Reference
Overall model fit	χ^2	$0 \leq \chi^2 \leq 2df$ (Good fit) $2df < \chi^2 \leq 3df$ (Acceptable fit)	Schermelleh-Engel et al., (2003)
	χ^2/df	≤ 2.00 (Good fit) ≤ 3.00 (Acceptable fit)	Bentler (1985)
	CFI	>0.95 (Good fit) $0.95-0.90$ (Acceptable fit)	Hu and Bentler (1999)
	TLI	>0.95 (Good fit) $0.95-0.90$ (Acceptable fit)	Hu and Bentler (1999)
	SRMR	< 0.05 (Good fit) $0.05-1.0$ (Acceptable fit)	Hu & Bentler, (1999)
	RMSEA	≤ 0.05 (Good fit) $0.05-0.08$ (Acceptable fit) $0.08-0.10$ (Mediocre fit)	Browne & Cudeck, (1992)
Reliability	Composite R.	>0.7	Garver & Mentzer (1999)
	AVE	>0.5	Garver & Mentzer (1999)
Convergent validity	Factor loadings	>0.5	Hair et al. (2014)
	R^2	> 0.3	Hair et al. (2014)
	AVE	>0.5	Fornell & Larcker (1981)
	Standardized estimates	$>$ twice their standard errors	Anderson & Gerbing (1988)
Discriminant validity	Inter-construct correlations	< 0.85	Kline (2011)
	Square-root of the AVEs	$>$ correlations	Fornell & Larcker (1981)

Source: Author

5.5.1.1. Overall Model Fit and Unidimensionality

In order to refine and test for unidimensional constructs using CFA, each latent variable should be treated individually at first. Unidimensionality testing should be performed for all conceivable pairings of measurement constructs once each one has been determined to be unidimensional on its own. Finally, the measuring model as a whole should be examined, as should each construct's unidimensionality be evaluated in the context of other constructs (Garver & Mentzer, 1999).

Although it is not necessary to provide all indices due to their overlap, researchers should include at least one absolute index, one incremental index, the chi-square value, and the degrees of freedom (Hair et al., 2014). Therefore, this study used at least one absolute fit indices (RMSEA and SRMR), one incremental fit indices (CFI and TLI), and chi-square and the normed chi-square (χ^2/df) index.

5.5.1.2. Scale Reliability

Internal consistency, which measures the consistency of variables on a summated scale, is more typically employed as a measure of reliability. Internal consistency is based on the idea that all of the scale's items or indicators should measure the same thing and thus be highly inter-correlated (Hair et al., 2014). Various indices of reliability can be computed to describe how well constructs are assessed by their indicators, either at the level of the individual item (individual-item reliability) or for all measures of a specific construct collectively (composite reliability, average variance extracted) (Baumgartner & Homburg, 1996). AVE is a measure of convergence among a set of items that represent a latent construct. It is the average proportion of variation among the items of a construct that can be explained (variation extracted) (Hair et al., 2014). AVE is also an indicator of convergent validity.

5.5.1.3. Convergent Validity

Individual items' reliability is measured by the R^2 value associated with the latent variable-to-item equation associated with each latent variable. Anderson and

Gerbing (1988) contended that convergent validity may be determined from measurement models by assessing the statistical significance of each indicator's estimated coefficient on its supposed underlying concept variables. There is convergent validity if the factor loadings are all statistically significant. The t-values show that the factor loadings differed considerably from zero (Dunn et al., 1994). As suggested by Fornell and Larcker (1981), AVE scores of 0.50 or above are sufficient for convergent validity to be established.

5.5.1.4. Discriminant Validity

In order for a scale to have discriminant validity, it must be able to distinguish between different types of information. To verify discriminant validity, we need to compare the model's construct correlations to a hypothetical model. The hypothetical model sets all correlations between constructs to one. Then it is computed the chi-squared difference. Discriminant validity is supported if the p value is less than 0.05 (Dunn et al., 1994). The most thorough technique to accomplish discriminant validity is to ensure that the AVE values of two constructs are always higher than the squared correlation between those constructs (Fornell & Larcker, 1981).

5.5.2. Measurement Model for Relationship Marketing Strategies

Table 35 presents the CFA results of the RMS scale. According to results, all factor loadings are over the critical factor loading value (0.5). All the t-values are greater than the critical t-value that shows significance of construct loadings. For all items, the standardized estimates are higher than twice their standard errors, which indicates that the model has excellent convergent validity. In addition, R^2 values greater than 0.30 indicate convergent validity. Only the variable IC1 has low (.284) but very close to critical R^2 value. Since the IC1 variable met other convergent validity criteria (factor loading: 0.533; t-value 7.913) it was decided to remain in the scale.

According to results of the model fit analysis of measurement model (Table 36), the overall fit of the RMS measurement model was good. Therefore, additional

post-hoc changes were not carried out. There is a good fit between the two-construct and 12 items of RMS measurement model and the data, as shown by this result.

Table 35: CFA Results of the RMS Scale

Construct	Item	Standardised regression Weight	t-value/P value	R ²	Standard error
Customer loyalty	CL1	.816	12.240***	.665	.077
	CL2	.821		.674	
	CL3	.807	12.115***	.651	.078
Internal capability	IC1	.533	7.913***	.284	.083
	IC2	.612	9.377***	.375	.075
	IC3	.747	12.207***	.558	.070
	IC4	.838		.703	
	IC5	.745	12.159***	.555	.082
	IC6	.640	9.893***	.410	.082
	IC8	.763	12.580***	.582	.068
	IC9	.827	14.182***	.685	.070
	IC10	.718	11.543***	.516	.069

Note: *** p<0.001

Source: Author

Table 36: Fit Indices of the Measurement Model for RMS Scale

Fit Index	Model	Criteria	Result
χ^2	130.704	$0 \leq \chi^2 \leq 2df$ (Good fit) $2df < \chi^2 \leq 3df$ (Acceptable fit)	Acceptable fit
χ^2/df	130.704/53=2.46	≤ 2.00 (Good fit) ≤ 3.00 (Acceptable fit)	Acceptable fit
CFI	.942	>0.95 (Good fit) $0.90-0.95$ (Acceptable fit)	Acceptable fit
TLI	.928	>0.95 (Good fit) $0.90-0.95$ (Acceptable fit)	Acceptable fit
SRMR	0.48	< 0.05 (Good fit) $0.05-1.0$ (Acceptable fit)	Good fit
RMSEA	.079	≤ 0.05 (Good fit) $0.05-0.08$ (Acceptable fit) $0.08-0.10$ (Mediocre fit)	Acceptable fit

Source: Author

Table 37 shows the result of reliability and discriminant validity analysis of the RMS. In terms of reliability, composite reliability of CL and IC were 0.855 and

0.905 respectively. The AVE value of CL and IC were larger than the critical value of 0.5. These results provided evidence for reliability. The correlations and square root of AVEs were evaluated in order to determine whether the discriminant validity was confirmed. As indicated in Table 38, each correlation between the constructs was less than 0.85 and were statistically significant at the 0.001 level, indicating discriminant validity between the variables (Kline, 2011). The square root of AVEs also outperformed each and every feasible pair of correlation between the constructs, showing significant support for discriminant validity between the constructs.

Table 37: Validity Analysis of the RMS Scale

	CR	AVE	MSV	MaxR(H)	Squared correlations	
					Customer loyalty	Internal Capability
Customer loyalty	0.855	0.664	0.472	0.856	0.815	
Internal Capability	0.905	0.519	0.472	0.918	0.687***	0.720
Significance of Correlations:†p < 0.10; * p < 0.05; ** p < 0.01; *** p < 0.001 (Hu & Bentler, 1999)						

Source: Author

5.5.3. Measurement Model for Relationship Quality

The CFA results for the RQ scale are presented in Table 38. According to the findings, all factor loadings are more than the crucial factor loading threshold (0.5) except CT3 (but very close to critical value; 0.464). In this measurement model analysis, all of the t-values are bigger than the crucial t-value, which indicates that construct loadings are significant. It is clear that the model's convergent validity is outstanding since for all items, the standardized estimates are greater than twice their standard errors. Furthermore, R² values larger than 0.30 imply the presence of convergent validity. Only CT3 has low R² value (.216). CT3 is an essential variable of RQ scale and removing this variable from the scale affects the fit indices negatively. It was determined that the variable CT3 met t-value criteria and has significant p value (p<0.001) hence should continue in the scale.

Table 38: CFA Results of the RQ Scale

Construct	Item	Standardized regression Weight	t-value	R ²	Standard error
Trust	TR1	.776	10.901***	.601	.082
	TR2	.830	10.961***	.689	.090
	TR3	.740		.547	
	TR4	.664	13.726***	.441	.067
	TR5	.785	10.321***	.616	.095
Commitment	CT1	.881	10.216***	.777	.131
	CT2	.765		.585	
	CT3	.464	5.574***	.216	.094

Note: *** p<0.001

Source: Author

Model fit analysis of the RQ measurement model (Table 39) revealed that the overall fit of the RMS measurement model was poor, with the exception of the SRMR value (0.71). The modifications proposed by the AMOS program have been implemented in order to improve the model fit and accuracy. It was decided to include the error covariance between TR1-TR5 and TR3-TR5 as well as between CT1-CT3 and CT2-CT3 as advised by the modification indices.

Table 39: Fit Indices of the Measurement Model for RQ Scale Before Modifications

Fit Index	Model	Criteria	Result
χ^2	118.789	$0 \leq \chi^2 \leq 2df$ (Good fit) $2df < \chi^2 \leq 3df$ (Acceptable fit)	Poor fit
χ^2/df	118.789/19=6.25	≤ 2.00 (Good fit) ≤ 3.00 (Acceptable fit)	Poor fit
CFI	.883	>0.95 (Good fit) $0.90-0.95$ (Acceptable fit)	Poor fit
TLI	.828	>0.95 (Good fit) $0.90-0.95$ (Acceptable fit)	Poor fit
SRMR	0.71	< 0.05 (Good fit) $0.05-0.10$ (Acceptable fit)	Acceptable fit
RMSEA	.160	≤ 0.05 (Good fit) $0.05-0.08$ (Acceptable fit) $0.08-0.10$ (Mediocre fit)	Poor fit

Source: Author

The CFA analysis was performed again. Along with the increases in SRMR (0.38) there was also an increase in the other fit indices (Table 40). It can be seen from this result that there is a good fit between the two-construct and eight items of the RQ measurement model and the data.

Table 40: Fit Indices of the Measurement Model for RQ Scale After Modifications

Fit Index	Model	Criteria	Result
χ^2	34.143	$0 \leq \chi^2 \leq 2df$ (Good fit) $2df < \chi^2 \leq 3df$ (Acceptable fit)	Acceptable fit
χ^2/df	34.143/15=2.27	≤ 2.00 (Good fit) ≤ 3.00 (Acceptable fit)	Acceptable fit
CFI	.978	>0.95 (Good fit) $0.90-0.95$ (Acceptable fit)	Good fit
TLI	.958	>0.95 (Good fit) $0.90-0.95$ (Acceptable fit)	Good fit
SRMR	0.38	< 0.05 (Good fit) $0.05-1.0$ (Acceptable fit)	Good fit
RMSEA	.79	≤ 0.05 (Good fit) $0.05-0.08$ (Acceptable fit) $0.08-0.10$ (Mediocre fit)	Acceptable fit

Source: Author

The results of the reliability and discriminant validity analyses of the RQ are presented in Table 41. Reliability data for TR and CT showed that their composite reliability was 0.872 and 0.758, respectively. The AVE values of TR and CT were both greater than the crucial threshold of 0.5. These findings providing evidence for the reliability of the measurement model. For the purpose of determining whether or not the discriminant validity was confirmed, the correlations and square root of the AVEs were calculated. The correlations between the constructs was statistically significant at the 0.001 level, suggesting that the variables had discriminant validity between them (Kline, 2011). Only a problem occurred in terms of discriminant validity; the square root of the AVE for commitment is less than its correlation with trust. The other discriminant validity criteria were met; each correlation between the constructs was less than 0.85, and they were all statistically significant at the 0.001 level, indicating that they had discriminant validity.

Table 41: Validity Analysis of the RQ Scale

	CR	AVE	MSV	MaxR(H)	Trust	Commitment
Trust	0.872	0.579	0.571	0.880	0.761	
Commitment	0.758	0.526	0.571	0.838	0.756***	0.725
Significance of Correlations: †p < 0.10; * p < 0.05; ** p < 0.01; *** p < 0.001 (Hu & Bentler, 1999)						

Source: Author

5.5.4. Measurement Model for Relationship Outcomes

The CFA results of RO scale are presented in Table 42. According to the findings, all factor loadings are ranged from 0.673 to 0.915 which are greater than the crucial factor loading threshold (0.5). All of the t-values are greater than the crucial t-value, which indicates that construct loadings are significant. It is clear that the model's convergent validity is outstanding since for all items, the standardized estimates are greater than twice their standard errors. Furthermore, R^2 values larger than 0.30 imply the presence of convergent validity.

Table 42: CFA Results of the RO Scale

Construct	Item	Standardized regression Weight	t-value	R²	Standard error
Loyalty	L1	.693		.480	
	L2	.915	11.645***	.837	.118
	L3	.859	11.171***	.738	.122
	L4	.691	9.162***	.477	.100
Collaboration	C1	.795		.632	
	C2	.856	12.918***	.733	.080
	C3	.825	12.386***	.681	.088
	C4	.673	9.619***	.453	.089

Source: Author

According to the model fit analysis of the RO measurement model (Table 43), it was revealed that there was good overall fit of the data except RMSEA value. The modification suggested by the AMOS have been implemented in order to increase the

RMSEA value to acceptable fit. As recommended by the modification indices, it was decided to incorporate the error covariance between C3 and C4.

Table 43: Fit Indices of the Measurement Model for RO Scale Before Modifications

Fit Index	Model	Criteria	Result
χ^2	48.460	$0 \leq \chi^2 \leq 2df$ (Good fit) $2df < \chi^2 \leq 3df$ (Acceptable fit)	Acceptable fit
χ^2/df	48.460/19=2.55	≤ 2.00 (Good fit) ≤ 3.00 (Acceptable fit)	Acceptable fit
CFI	.971	>0.95 (Good fit) $0.90-0.95$ (Acceptable fit)	Good fit
TLI	.955	>0.95 (Good fit) $0.90-0.95$ (Acceptable fit)	Good fit
SRMR	0.496	< 0.05 (Good fit) $0.05-1.0$ (Acceptable fit)	Good fit
RMSEA	.087	≤ 0.05 (Good fit) $0.05-0.08$ (Acceptable fit) $0.08-0.10$ (Mediocre fit)	Mediocre fit

Source: Author

The CFA analysis was carried out once more. The other fit indices also increased in tandem with the increase in RMSEA (0.79), which was also a positive sign (Table 44). Clearly, the data and the two-construct and eight-item of RO measurement model have an excellent fit, as demonstrated by this finding.

Table 44: Fit Indices of the Measurement Model for RO Scale After Modifications

Fit Index	Model	Criteria	Result
χ^2	40.681	$0 \leq \chi^2 \leq 2df$ (Good fit) $2df < \chi^2 \leq 3df$ (Acceptable fit)	Acceptable fit
χ^2/df	40.681/18=2.26	≤ 2.00 (Good fit) ≤ 3.00 (Acceptable fit)	Acceptable fit
CFI	.977	>0.95 (Good fit) $0.90-0.95$ (Acceptable fit)	Good fit
TLI	.964	>0.97 (Good fit) $0.95-0.97$ (Acceptable fit)	Acceptable fit
SRMR	0.463	< 0.05 (Good fit) $0.05-1.0$ (Acceptable fit)	Good fit
RMSEA	.079	≤ 0.05 (Good fit) $0.05-0.08$ (Acceptable fit) $0.08-0.10$ (Mediocre fit)	Acceptable fit

Source: Author

The findings of the reliability and discriminant validity assessments of the RO are reported in Table 45. Reliability analysis for L and C showed that their composite reliability was 0.871 and 0.869, respectively and greater than critical value of 0.70. The AVE values of L and C were both greater than the critical threshold of 0.5. These findings give evidence for the reliability of the measurement model. For the aim of establishing whether or not the discriminant validity was confirmed, the correlations and square root of the AVEs were calculated. The correlations between the constructs was statistically significant at the 0.001 level, demonstrating that the variables exhibited discriminant validity between them (Kline, 2011). Correlation between the constructs was less than 0.85, and they were all statistically significant at the 0.001 level, indicating that they had discriminant validity.

Table 45: Validity Analysis of the RO Scale

	CR	AVE	MSV	MaxR(H)	Loyalty	Collaboration
Loyalty	0.871	0.633	0.528	0.907	0.795	
Collaboration	0.869	0.625	0.528	0.881	0.727***	0.790
Significance of Correlations:†p < 0.10; * p < 0.05; ** p < 0.01; *** p < 0.001 (Hu & Bentler, 1999)						

Source: Author

5.6. ASSESSING STRUCTURAL MODEL

Due to the validation of the measurement models included in the structural model in the previous sections, this study continues to evaluate the proposed structural model and examine the hypothetical relationships.

5.6.1. SEM Results and Hypotheses Testing

According to the model fit analysis of the structural model (Table 46), the overall fit of the data to structural model was acceptable, with the exception of the CFI and TLI values (respectively 0.888 and 0.877). Although these values are near to the acceptable value, the AMOS program's proposed modifications have been implemented to improve the model's fit. According to the change indices, the error

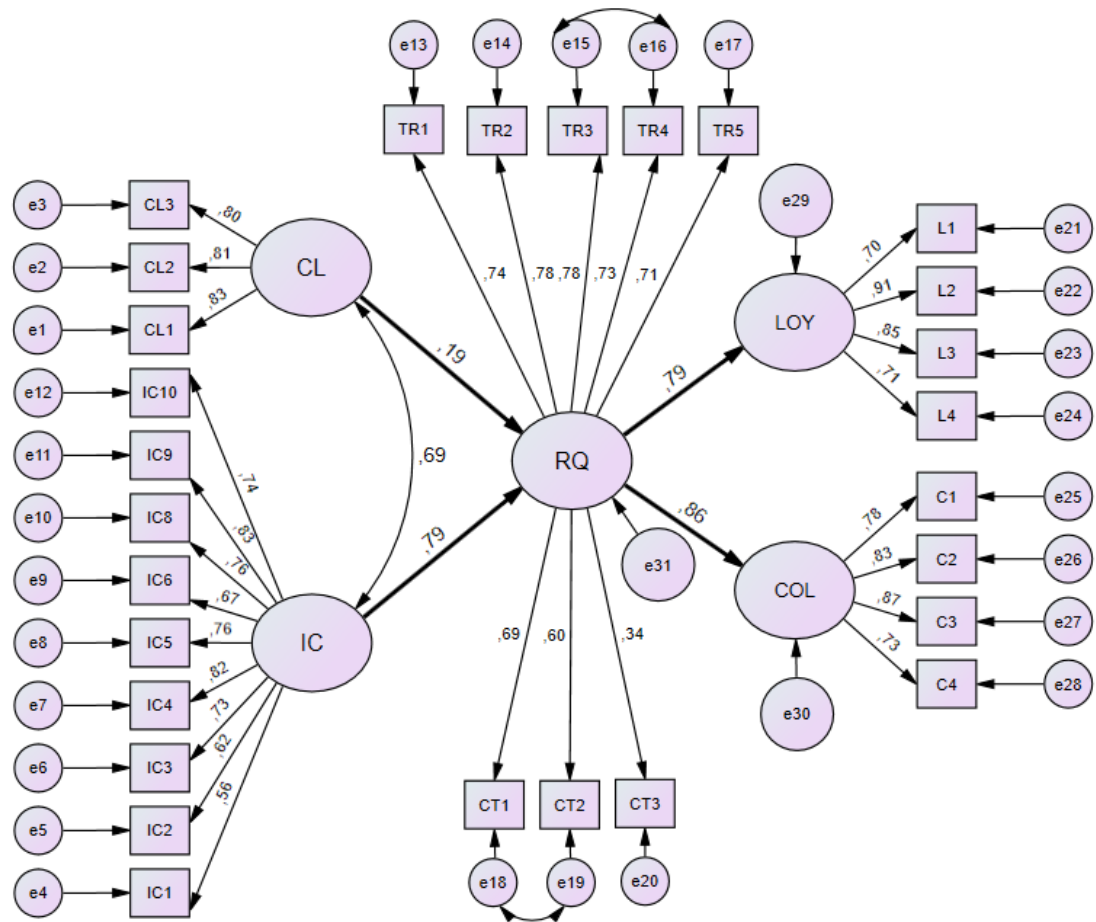
covariance between TR3 and TR4 was added to the model. The program was performed again. Along with the increases in CFI (0.911) and TLI (0.902) there was also an increase in the other fit indices (Table 46). It can be seen from this result that there is a good fit between the five-construct and 28 items of the structural model and the data. Figure 20 shows the modified structural model and coefficient values.

Table 46: Overall Model Fit Indices of the Structural Model

Model	χ^2	χ^2/df	CFI	TLI	RMSEA	SRMR
Before modifications	768.767	2.228	.888	.877	.078	.060
After modifications	679.325	1.981	.911	.902	.069	.058

Source: Author

Figure 20: Structural Model



Source: Author

The R^2 value of collaboration and loyalty were found to be 0.733 and 0.623, respectively, which indicates that the model has a high degree of explanatory power. In addition, constructs of relationship marketing strategies (CL and IC) explains the variance of relationship quality (RQ) very strongly (R^2 : 0.860).

Following the testing of the structural model, hypotheses and indirect relationships were evaluated under the following two headings. Based on the data in Table 47, the first phase focuses on the direct impacts (hypotheses test)). The indirect effects are examined and evaluated under second phase.

Table 47: Structural Model Results

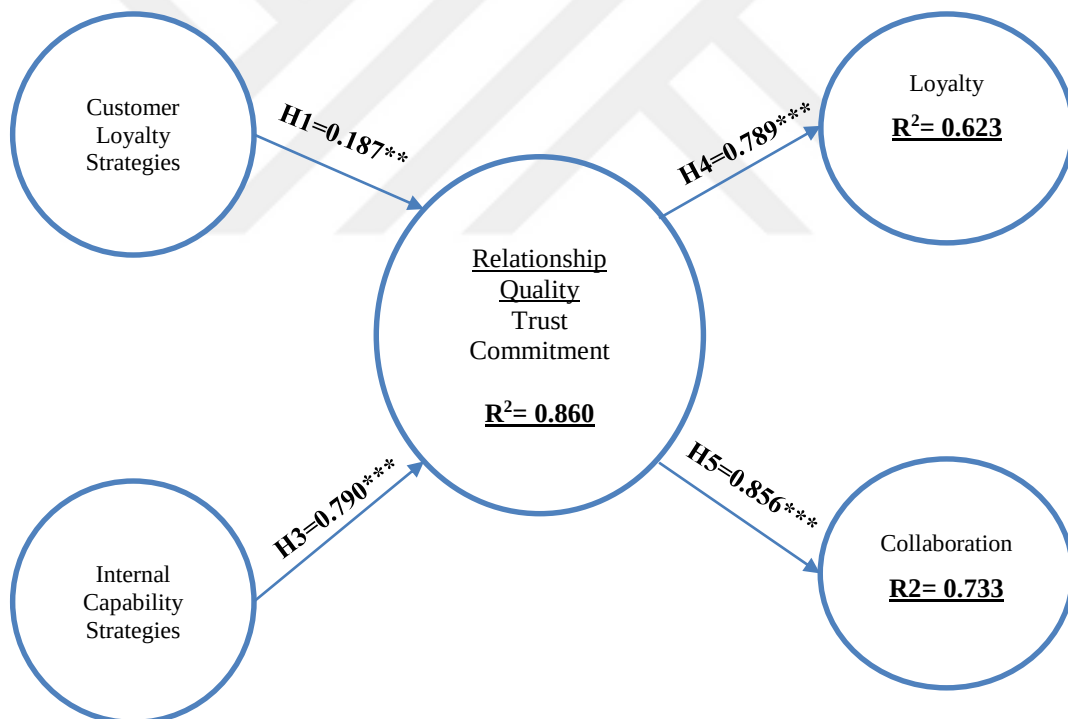
Path	Standardised regression weight	t-value/p value
CL → RQ	.187	2.897**
IC → RQ	.790	6.882***
RQ → LOY	.789	8.477***
RQ → COL	.856	9.822***
CL → CL1	.804	
CL → CL2	.811	12.376***
CL → CL3	.826	12.265***
IC → IC1	.728	
IC → IC2	.618	7.040***
IC → IC3	.557	7.816***
IC → IC4	.824	8.392***
IC → IC5	.763	8.035***
IC → IC6	.666	7.392***
IC → IC8	.756	7.997***
IC → IC9	.826	8.401***
IC → IC10	.737	7.873***
RQ → TR1	.738	
RQ → TR2	.784	11.333***
RQ → TR3	.783	11.310***
RQ → TR4	.730	10.470***
RQ → TR5	.708	10.149***
RQ → CT1	.686	9.795***
RQ → CT2	.595	8.426***
RQ → CT3	.340	4.736***
Loy → L1	.695	
Loy → L2	.907	11.678***
Loy → L3	.851	11.143***
Loy → L4	.713	9.476***
Col → C1	.776	
Col → C2	.826	12.495***
Col → C3	.865	13.170***
Col → C4	.733	10.854***

Note: *** $p < 0.001$; ** $p < 0.01$

5.6.1.1. Direct Relationships in the Structural Model

According to the statistical tests, all path coefficient of the paths of structural model have been found significant (Figure 21). Thus, all hypotheses were supported (Table 48). The path coefficient of customer loyalty strategies on relationship quality was significant at $p < 0.01$ level and reached 0.187, the respondents thought that customer loyalty strategies as offered by a container shipping line has an influence on relationship quality. Therefore, H1 “the relationship quality between freight forwarder and container shipping line is significantly influenced by container shipping line’s customer loyalty strategies in the maritime logistics industry” was supported.

Figure 21: Path Coefficients and Squared Multiple Correlations (Direct Impact)



Note: *** $p < 0.001$; ** $p < 0.01$

Source: Author

The path coefficient of internal capability strategies on relationship quality was 0.790 and significant at $p < 0.001$ level, demonstrating that internal capabilities of a container shipping line has strong effect on relationship quality. Therefore, H3 “the

relationship quality between freight forwarder and container shipping line is significantly influenced by container shipping line's internal capability strategies in the maritime logistics industry" was supported.

Table 48: Results of Hypotheses Test

Path	Research Hypothesis	Result
CL → RQ	H1: The relationship quality between freight forwarder and container shipping line is significantly influenced by container shipping line's customer loyalty strategies in the maritime logistics industry.	Supported
IC → RQ	H3: The relationship quality between freight forwarder and container shipping line is significantly influenced by container shipping line's internal capability strategies in the maritime logistics industry.	Supported
RQ → Loyalty	H4: The loyalty of freight forwarder is significantly influenced by relationship quality between freight forwarder and container shipping line.	Supported
RQ → Collaboration	H5: The collaboration intention of freight forwarder is significantly influenced by the relationship quality between freight forwarder and container shipping line	Supported

Source: Author

The considerable impact of relationship quality on freight forwarder's loyalty to container shipping line evidenced by the path coefficient of 0.789 and significance at the $p < 0.001$ level. Therefore, H4 "the loyalty of freight forwarder is significantly influenced by relationship quality between freight forwarder and container shipping line" was supported. Finally, the path coefficient of relationship quality toward freight forwarder's collaboration was high as 0.856 and significant at the $p < 0.001$ level. Such a high path coefficient value shows that relationship quality has favorable effect on collaboration intention of freight forwarders. Therefore, H5 "the collaboration intention of freight forwarder is significantly influenced by the relationship quality between freight forwarder and container shipping line" was supported.

5.6.1.2. Indirect Relationships in the Structural Model

Due to the tested model consist of mediating variable (RQ), indirect relationships are included. The significance of these relationships should also be

investigated as part of the study. To determine significance of indirect relationships, as proposed by Qrunfleh and Tarafdar (2013), this study analyzed 2,000 bootstrap samples with a confidence level of 90%. All indirect relationships in the structural model have found significant.

According to the findings of indirect relationships (Table 49), it was noted that the highest indirect relationships were in the relationships of internal capability strategies with loyalty and collaboration (0.623 and 0.676, respectively). Customer loyalty strategies have positive, but lesser indirect impacts on both loyalty and collaboration (0.147 and 0.160, respectively)

Table 49: Indirect Relationships in the Structural Model (Bootstrapped)

Indirect relationships	Calculation	Standardized loadings	Lower bounds-Upper bounds
Customer Loyalty Strategies (CL)→ Loyalty (LOY)	0.187*0.789	0.147	0.052-0.244
Internal Capability Strategies (IC) → Loyalty (LOY)	0.790*0.789	0.623	0.514-0.723
Customer Loyalty Strategies (CL)→ Collaboration (COL)	0.187*0.856	0.160	0.058-0.262
Internal Capability Strategies (IC) → Collaboration (COL)	0.790*0.856	0.676	0.585-0.773

Source: Author

5.6.1.3. Testing the Role of Relationship Quality as Mediator

In accordance with the commitment-trust theory, relationship quality (trust and commitment) play a vital role in mediating the relationship in order to assure its continuation. Cooperative environments are created between parties participating in a relationship when trust and commitment are in place; this helps them resist enticing short-term alternatives; and they see risky activities as prudent (Hashim & Tan, 2015).

The data is analyzed using the structural equation modeling technique, which is combined with the mediating analysis procedure developed by Baron and Kenny (1986). According to the authors three conditions must met to test the mediation effect:

(1) The independent variable (customer loyalty strategies and internal capability strategies) must have significant impact on the mediating variable (relationship quality) – Direct model 1

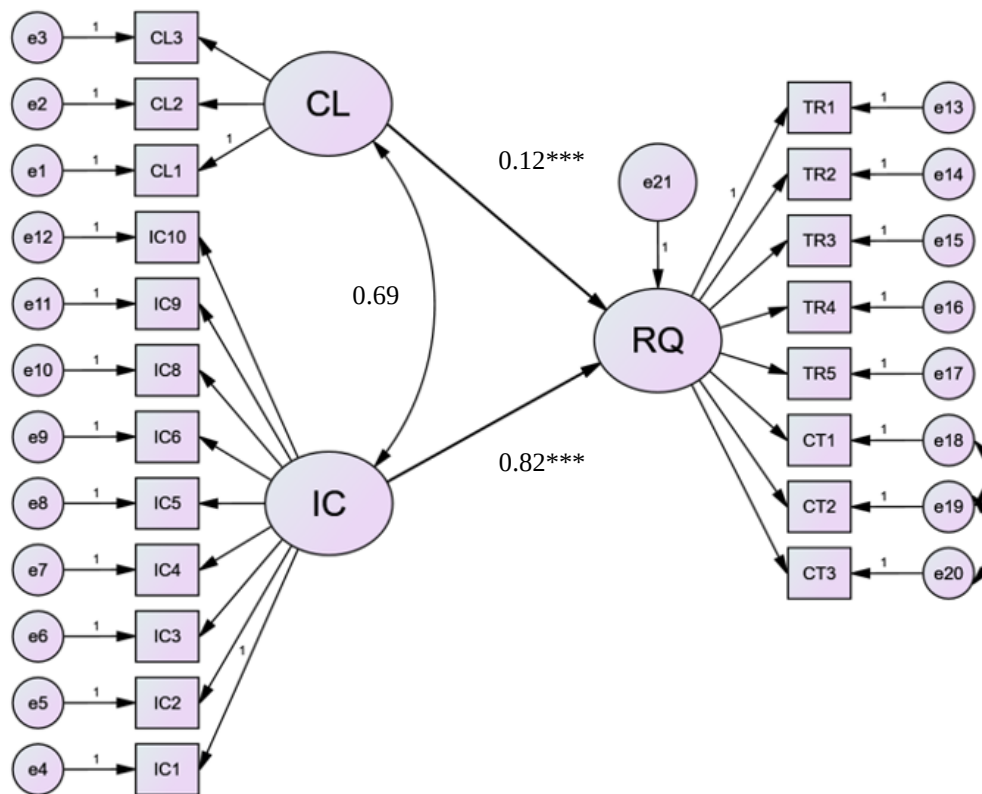
(2) The independent variable (customer loyalty strategies and internal capability strategies) must have significant impact on the dependent variable (loyalty and collaboration) – Direct model 2

(3) The mediating variable (relationship quality) must have significant impact on the dependent variable (loyalty and collaboration) – Direct model 3

(4) When the mediating variable (relationship quality) is included in the regression analysis in the second step, the effect of the independent variable (customer loyalty strategies and internal capability strategies) on the dependent variable (loyalty and collaboration) must decrease – Model with mediator

Figure 22 shows the structural direct model 1 and coefficient value of direct relationships.

Figure 22: Direct Model 1



Note: ***p<0.001

Source: Author

According to the results (Table 50), the considerable impact of customer loyalty strategies on relationship quality are evidenced by the path coefficient of 0.116 (significant at the $p < 0.001$ level). The high impact of internal capability strategies on relationship quality are demonstrated by the high path coefficient of 0.823 which significant at the $p < 0.001$ level.

Table 50: Structural Model Results of Direct Model 1

Path	Standardized Regression Weights	t-value/p value
CL → RQ	.116	1.684***
IC → RQ	.823	6.876***
CL → CL1	.825	
CL → CL2	.815	12.350***
CL → CL3	.802	12.145***
IC → IC1	.557	
IC → IC2	.615	6.998***
IC → IC3	.731	7.817***
IC → IC4	.825	8.373***
IC → IC5	.761	8.004***
IC → IC6	.665	7.373***
IC → IC8	.755	7.968***
IC → IC9	.826	8.381***
IC → IC10	.740	7.877***
RQ → TR1	.761	
RQ → TR2	.782	11.609***
RQ → TR3	.825	12.351***
RQ → TR4	.776	11.502***
RQ → TR5	.709	10.376***
RQ → CT1	.667	9.679***
RQ → CT2	.558	7.956***
RQ → CT3	.317	4.396***

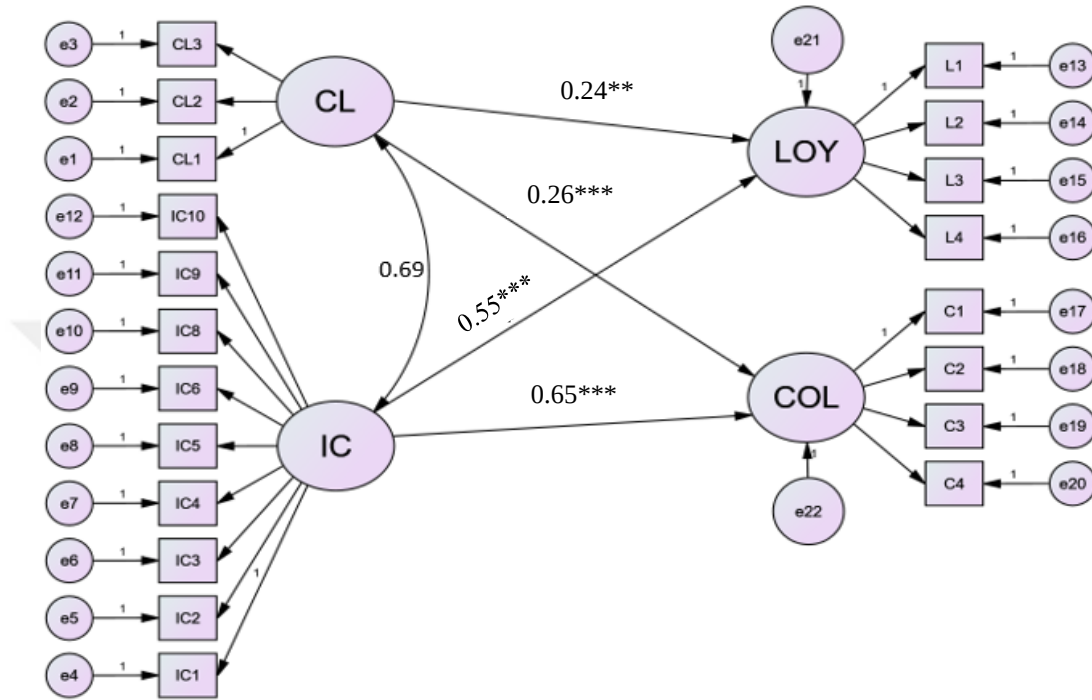
Note: *** $p < 0.001$

Source: Author

Figure 23 depicts the structural model without a mediator (direct model 2). According to the results (Table 51), the considerable impact of customer loyalty strategies on freight forwarder's loyalty and collaboration are evidenced by the path coefficient of 0.238 (significant at the $p < 0.01$ level) and 0.255 (significant at the $p < 0.001$ level), respectively. The high impact of internal capability strategies on

freight forwarder's loyalty and collaboration are demonstrated by the high path coefficient of 0.543 and 0.654, respectively, both significant at the $p < 0.001$ level.

Figure 23: Direct Model 2



Note: *** $p < 0.001$; ** $p < 0.01$;

Source: Author

Table 51: Structural Model Results of Direct Model 2

Path	Standardized Regression Weights	t-value/p value
CL → LOY	.238	2.597**
IC → COL	.654	5.942***
IC → LOY	.543	4.841***
CL → COL	.255	3.228***
CL → CL1	.817	
CL → CL2	.808	12.232***
CL → CL3	.815	12.326***
IC → IC1	.547	
IC → IC2	.624	6.948***
IC → IC3	.733	7.675***
IC → IC4	.829	8.201***
IC → IC5	.763	7.846***

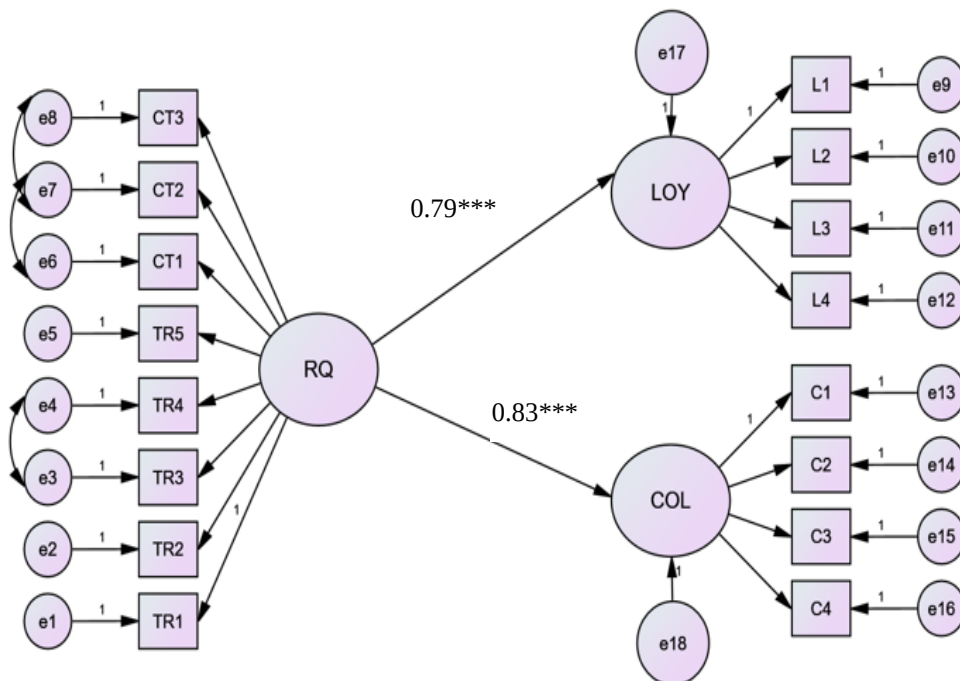
Path	Standardized Regression Weights	t-value/p value
IC → IC6	.658	7.192***
IC → IC8	.756	7.806***
IC → IC9	.825	8.181***
IC → IC10	.728	7.641***
LOY → L1	.695	
LOY → L2	.907	11.634***
LOY → L3	.856	11.175***
LOY → L4	.705	9.360***
COL → C1	.760	
COL → C2	.815	12.011***
COL → C3	.882	13.078***
COL → C4	.735	10.683***

Note: ***p<0.001; **p<0.01;

Source: Author

Figure 24 shows the structural direct model 3. According to the results (Table 52), the high impact of relationship quality on both loyalty and collaboration are evidenced by the path coefficient of 0.794 and 0.826 (both significant at the p<0.001 level), respectively.

Figure 24: Direct Model 3



Note: ***p<0.001

Source: Author

Table 52: Structural Model Results of Direct Model 3

Path	Standardized Regression Weights	t-value/p value
RQ → LOY	.794	8.448***
RQ → COL	.826	9.542***
LOY → L1	.693	
LOY → L2	.913	11.706***
LOY → L3	.850	11.112***
LOY → L4	.707	9.390***
COL → C1	.783	
COL → C2	.832	12.675***
COL → C3	.856	13.077***
COL → C4	.730	10.846***
RQ → TR1	.747	
RQ → TR2	.790	11.310***
RQ → TR3	.785	11.227***
RQ → TR4	.711	10.045***
RQ → TR5	.723	10.269***
RQ → CT1	.689	9.749***
RQ → CT2	.602	8.427***
RQ → CT3	.356	4.888***

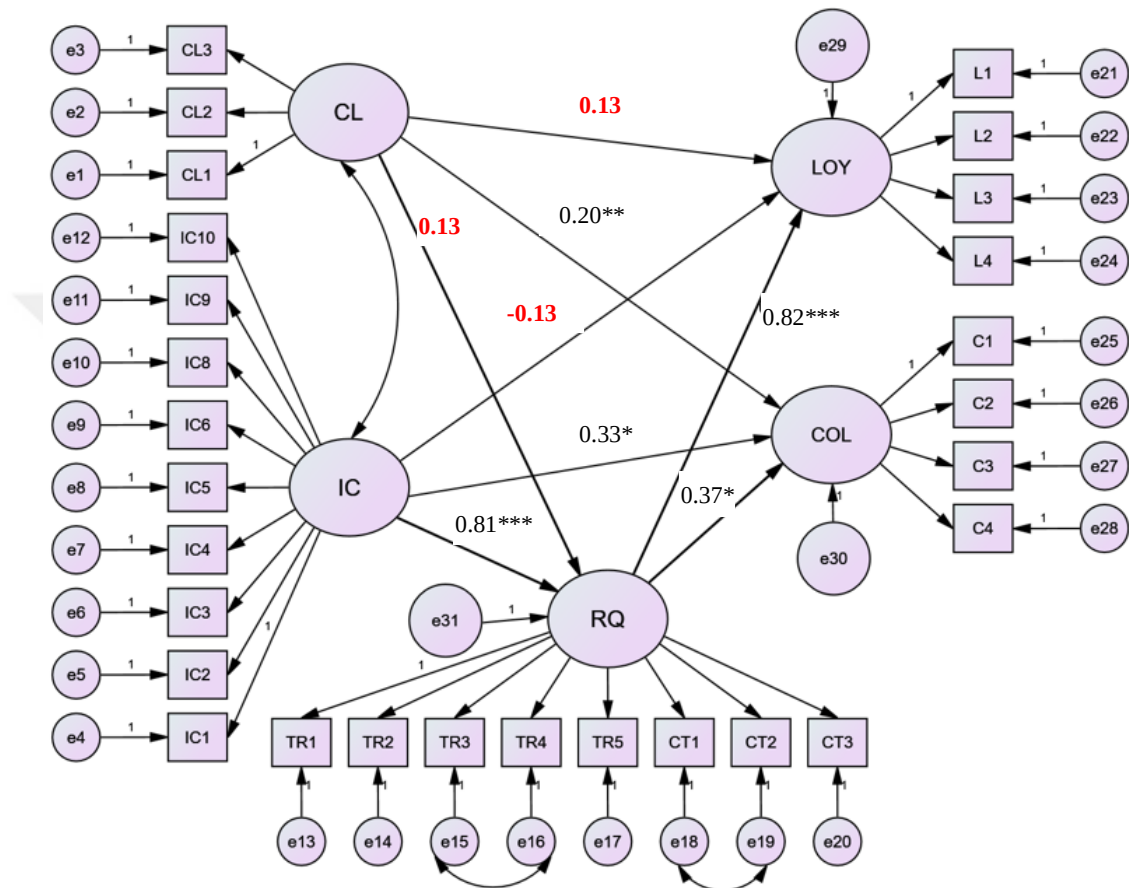
Note: ***p<0.001

Source: Author

Figure 25 shows the structural model with relationship quality mediator. According to the results (Table 53), the impact of customer loyalty strategies on relationship quality is not significant by the path coefficient of 0.134 (p value 0.058). The impact of internal capability strategies on relationship quality is highly significant by the path coefficient of 0.813. The mediator's impact on both loyalty and collaboration have found significant. The high impact of relationship quality on loyalty is founded significant at $p < 0.001$ level with the high path coefficient of 0.815. The impacts of relationship quality on freight forwarders' collaboration is significant at $p < 0.05$ level with considerable path coefficient of 0.372. The direct impact of customer loyalty strategies on freight forwarder's loyalty is insignificant and has low path coefficient value of 0.132. Likewise, internal capability strategies did not have a significant direct effect on freight forwarder's loyalty and has negative low path coefficient value of -0.132. Both two variable of relationship marketing strategies have low but significant direct impact on collaboration. The considerable impact of customer loyalty strategies and internal capability strategies on collaboration are

evidenced by the path coefficient of 0.207 (significant at the $p < 0.01$ level) and 0.339 (significant at the $p < 0.05$ level), respectively.

Figure 25: Structural Model with Mediator



Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Source: Author

Table 53: Structural Model Results of Model with Mediator

Path			Standardised regression weight	t-value/p value
CL	→	RQ	0.134	1.898 (0.058)
IC	→	RQ	0.813	6.802***
CL	→	LOY	0.132	1.470 (0.142)
CL	→	COL	0.207	2.625**
IC	→	LOY	-0.132	-0.694 (0.488)
IC	→	COL	0.339	2.118*
RQ	→	LOY	0.815	3.862***
RQ	→	COL	0.372	2.298*
CL	→	CL1	.820	
CL	→	CL2	.810	12.311***
CL	→	CL3	.811	12.333***
IC	→	IC1	.557	
IC	→	IC2	.620	7.052***
IC	→	IC3	.728	7.811***
IC	→	IC4	.825	8.384***
IC	→	IC5	.763	8.029***
IC	→	IC6	.662	7.363***
IC	→	IC8	.758	7.999***
IC	→	IC9	.827	8.396***
IC	→	IC10	.736	7.863***
RQ	→	TR1	.754	
RQ	→	TR2	.794	11.696***
RQ	→	TR3	.788	11.586***
RQ	→	TR4	.731	10.629***
RQ	→	TR5	.714	10.389***
RQ	→	CT1	.687	9.940***
RQ	→	CT2	.595	8.493***
RQ	→	CT3	.348	4.848***
LOY	→	L1	.695	
LOY	→	L2	.910	11.702***
LOY	→	L3	.850	11.128***
LOY	→	L4	.711	9.448***
COL	→	C1	.767	
COL	→	C2	.820	12.241***
COL	→	C3	.875	13.146***
COL	→	C4	.735	10.781***

Note: ***p<0.001; **p<0.01; * p<0.05

Source: Author

Table 54 includes the comparison of tested models and presents the results of mediating role of relationship quality. The path coefficient of customer loyalty

strategies on freight forwarder's loyalty decreases to 0.132 and no longer significant when we added the relationship quality as a mediator to the structural model. This means relationship quality fully mediates the relationship between customer loyalty strategies and freight forwarder's loyalty. The path coefficient of customer loyalty strategies on freight forwarder's collaboration decreases to 0.207 but still significant at $p < 0.01$ level. Therefore, the partial mediation role of relationship quality between customer loyalty strategies and freight forwarder's collaboration evidenced by this result. According to the results, the path coefficient between internal capability strategies and loyalty decrease to negative value of -0.132 and no longer significant when we added relationship quality to the structural model. It means the relationship quality fully mediates the relationship between internal capability strategies and freight forwarder's loyalty. The path coefficient of internal capability strategies on collaboration decrease to value of 0.339 but it is still significant at $p < 0.05$ level. Thus, it is evidenced that relationship quality partially mediates the relationship between internal capability strategies and freight forwarder's collaboration.

Table 54: Comparison Between Models

Standardised regression weight/p value				
Paths	Direct model 1	Direct model 2	Direct model 3	Model with mediator
CL → RQ	0.116***			0.134(0.058)
IC → RQ	0.823***			0.813***
CL → LOY		0.238**		0.132 (0.142)
CL → COL		0.255***		0.207**
IC → LOY		0.543***		-0.132 (0.488)
IC → COL		0.654***		0.339*
RQ → LOY			0.794***	0.815***
RQ → COL			0.826***	0.372*
Model fit				
Indices	Direct model 1	Direct model 2	Direct model 3	Model with mediator
χ^2/df	2.141	2.206	1.987	1.966
CFI	0.924	0.923	0.952	0.913
TLI	0.912	0.912	0.942	0.903
RMSEA	0.075	0.077	0.070	0.069
SRMR	0.053	0.064	0.061	0.061

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Source: Author

CONCLUSION

The study aims to reveal relationship marketing strategies performed in the maritime logistics industry and the effect of these strategies on the relationship between maritime logistics partners. For this purpose, a conceptual model has been proposed and hypotheses have been developed to fill the gap in the literature.

A comprehensive literature review was conducted to develop the conceptual model and hypotheses (Chapter one). By examining the relationship marketing and maritime logistics literature (Chapter one and Chapter two), the dimensions including relationship marketing strategies to be used in the research model were decided (Chapter three). A qualitative study was also carried out to explore relationship marketing strategies (Chapter three), as there are few studies in this direction in the maritime logistics literature. According to the results of the literature review and qualitative research, a conceptual model has been created, hypotheses have been developed and the sample has been determined to examine the relationships between the two main actors of the maritime logistics sector, container shipping lines and freight forwarders (Chapter four). Then, the impacts of relationship marketing strategies performed by container shipping lines, included in the conceptual model of the research, on the loyalty and collaboration of freight forwarders was tested (Chapter 5). In this last section, descriptive analyzes based on the responses to the questionnaire applied are included. Afterwards, exploratory factor analysis and confirmatory factor analysis, which are the requirements of structural equation modeling to be used for testing hypotheses, were performed. Thus, the validity and reliability analyzes of the data and measurement tool used in the study were carried out. At the last stage of the chapter, the proposed conceptual model (structural model) was tested.

Within the scope of the study, the answer to the following research question was sought first; “How does the relationship marketing strategies formed in the maritime logistics industry?”. After reviewing the relevant literature, only two studies were found (e.g. Balci et al., 2019 in container shipping industry; Caliskan and Esmer, 2017 in port industry) investigating relationship marketing strategies in the maritime logistics industry. A qualitative research was conducted to fill this gap in the literature. For this purpose, the studies in the business-to-business service marketing literature,

including the maritime logistics industry, were examined in more detail and the following three dimensions based on Porter's value chain system were determined; customer loyalty strategies (loyalty programs, value-added services, relationship pricing, etc.), customer value research (acquiring customer information, customer value analysis, customer profitability analysis, etc.), internal capability strategies(such as technological, procedural and human capability) required for the realization of these two strategies.

A qualitative research was conducted with the questionnaire form created on the basis of these three relationship marketing strategies and with the participation of a total of 22 (12 CSLs and 10 FFs) stakeholders from maritime logistics industry. According to the findings obtained by the deductive approach and content analysis method, the relationship marketing strategies that create customer loyalty were as follows, according to the frequency of expression by the participants; loyalty programs, relationship pricing, communication, logistics service competency and core service strategies. These dimensions have been proposed by many researchers before as relationship marketing strategies (e.g. Berry, 1983; 1995; 2002; Caliskan & Esmer, 2017; Caliskan, 2019; Balci et al., 2019; Camarero Izquierdo et al., 2005; Ndubisi, 2012; Chaston, 1998; Chaston et al., 2000; Sanzo & Vazques, 2011). The results reflect the findings of prior study indicating that financial bonding practice of CSLs, including deferred payment opportunities and freight rate discounts, had the greatest total effect on FFs' loyalty compared to other performed relationship marketing strategies (Balci et al., 2019). This finding is also consistent with that findings of Kannan et al. (2011) who found that shippers regard low freight costs and pricing flexibility as the most essential factor when selecting a carrier.

There is a need for personalized information on each customer met their needs, allowing for a rapid response to their operational and commercial demands, as well as a comprehensive customer value analysis and customer profitability analysis. The results match the findings of prior study indicating that marketing/sales representative ratings had the greatest influence on the overall satisfaction of shipping managers (Durvasula, Lysonski & Mehta, 2002). Obtaining costumer data helps tailor the relationship. This outcome is consistent with the idea that service organizations can better tailor their services to customers' expectation after collecting their data (Berry,

2002). The questioned CSLs employ CRM systems to generate distinctive customer interactions and a competitive edge. Previous studies (e.g. Durvasula, Lysonski and Mehta, 2004; Sanzo and Vázquez, 2011; Yang and Nguyen, 2011) found similar results.

Customer-focused container shipping lines must design procedures, such as one to find out why customers desert. In the maritime logistics industry, interviewed CSLs indicated that, they conduct annual satisfaction surveys to get input on their operational, commercial, financial, and documentation processes. After receiving feedback, CSLs visit customers to analyze survey data and investigate dissatisfaction. They strive to reduce customer desertion. This study supports Sanzo and Vazques' (2011) claim that businesses must create a procedure to investigate why customers desert.

Human factor is crucial in maritime logistics business, as in all service businesses. Human resource capabilities such as employee expertise, understanding customer needs, and quick response to customer requirements impact customer loyalty. This finding is congruent with the literature, as these criteria are cited as essential container shipping line service features in Kannan et al. (Kannan, Bose, & Kannan, 2011) and Thai (Thai, 2008). The results confirm prior research that human resource management (HRM) is a crucial container shipping line service attributes (Lu, 2007).

Another research question of the study is: “What are the determinants of relationship quality between exchange partners in the maritime logistics industry?”. In order to find an answer to this research question, relationship marketing and maritime studies have been extensively reviewed. It was found that trust and commitment, two critical characteristics of relationship quality, have been widely researched in maritime logistics studies (e.g. Jang et al., 2013; Chou et al., 2018; Shin et al., 2018; Caliskan and Esmer, 2020). Athanasopoulou (2009) reviewed the existing studies on relationship quality between 1987 and 2007 and found trust, commitment, and satisfaction that have been utilized in numerous research and validated in many contexts. Creating a business-to-business connection and facilitating collaboration between customers and suppliers is facilitated by trust and commitment (Morgan and Hunt, 1994, Kumar, Scheer and Steenkamp, 1995, Skinner Beitelspacher et al., 2012).

Other research questions of the study were examined with statistical analysis methods. One of these research questions is: What are the freight forwarders' perceptions of the relationship marketing strategies of container shipping lines? According to the descriptive statistics performed in SPSS software, the variables with the highest degree of participation are CL1 (i.e. the container shipping line gives priority to long-term customer loyalty) for customer loyalty strategies; CV2 (i.e. the container shipping line gives priority to customers with high profitability) for customer value strategies; IC7 (i.e. staff stability is an important objective for the container shipping line) for internal capability strategies. Container shipping lines must demonstrate that they care about long-term relationships with special customers by developing relationship marketing strategies that will benefit them. RM strategies such as loyalty programs and relationship pricing are evidence of long-term oriented relationships. This result is very important in terms of relational motivation of freight forwarders to continue relationship. As Voss and Giraud Voss (1997) stated that if both the supplier and the customer are highly motivated to maintain the relationship, a long-term bilateral relationship can be developed in which both parties benefit. Therefore, the highly accepted perception of freight forwarders that container shipping lines give priority to customers with high profitability is an expected result. Freight forwarders with a large amount of cargo they control have priority over other customers as their bargaining power increases against container shipping lines. This finding is consistent with Gwinner et al.'s (1998) view that customers that maintain long-term relationships with service organizations gain the benefits of special treatment. The remaining three research questions of the study were tried to be answered with hypothesis tests by using SEM.

The main research question of the study is "What are the impacts of a container shipping line's relationship marketing strategies on loyalty and collaboration of a freight forwarder". In the conceptual model of the study, it has been proposed that the effect of relationship marketing strategies on loyalty and collaboration occurs through relationship quality, based on commitment-trust theory. For this reason, it has been hypothesized that the relationship marketing strategies performed by the container shipping lines significantly affect relationship quality with freight forwarders (H1-H3). The H1 (The relationship quality between freight forwarder and container

shipping line is significantly influenced by container shipping line's customer loyalty strategies in the maritime logistics industry) was found to be significant at the $p < 0.01$ level as a result of the analyzes made and thus the hypothesis was supported. Customer value strategies, which is the second dimension of relationship marketing strategies, decreased to a single variable as a result of exploratory factor analysis, removing two variables that were highly correlated with another factor. Structural equation modelling researchers recommend having at least three variables in each factor for structural equation modelling. It is emphasized that even bivariate factors are insufficient to produce meaningful statistics in structural equation analyzes. The dimension of customer value strategies did not produce a significant t-value in CFA analysis of measurement model. Therefore, H2, the relationship quality between freight forwarder and container shipping line is significantly influenced by container shipping line's customer value strategies in the maritime logistics industry, could not be tested. The analysis continued by removing this dimension from the conceptual research model. The third hypothesis of the study is that "the relationship quality between freight forwarder and container shipping line is significantly influenced by container shipping line's internal capability strategies in the maritime logistics industry". As a result of the SEM analysis, H3 was found to be significant at $p < 0.001$ level with a high path coefficient value and thus supported. Thus, the significant impact of relationship marketing strategies (i.e. customer loyalty strategies and internal capability strategies) on relationship quality statistically evidenced by these results. This result provides empirical evidence to the research conducted by Palmatier et al. (2006) who found that relationship marketing strategies such as competence and communication had great influence on the relationship quality. The finding also consistent with that customer orientation (understanding customer needs, potential source of service failure and dissatisfaction etc.), communication (information about customers etc.) and competence (expertise, technical skills etc.) have significant impact on relationship quality. Moore and Cunningham (1999) had found that effective logistics relationship has great impact on level of trust and commitment. This finding is supported by our finding that RM strategies that try to develop long-term relationships have a high impact on trust and commitment.

The fourth hypothesis of the study suggests that “the loyalty of freight forwarder is significantly influenced by relationship quality between freight forwarder and container shipping line”. As the result of the SEM analysis, H4 was found to be significant at the $p < 0.001$ level, thus this hypothesis was supported. Ndubisi (2007) found that trust and commitment have significant impact on customer loyalty and predict high variance of this customer-related outcomes of relationship. Wallenburg et al. (2011) examined logistics outsourcing relationships and found that commitment has direct significant effect on loyalty. Yuen et al. (2018) investigated intermediary role of trust between sustainable shipping practices and loyalty and found that trust has a positive impact on shipper’s loyalty. All of these findings have supported by our finding that relationship quality (i.e. trust and commitment) has greater and significant impact on loyalty.

The fifth and final hypothesis of the study suggests that “The collaboration intention of freight forwarder is significantly influenced by the relationship quality between freight forwarder and container shipping line”. As a result of the SEM analysis, H5 was found to be significant at the $p < 0.001$ level, thus this hypothesis was supported. The finding is consistent with proposition of some authors (Palmatier et al., 2006; Morgan and Hunt, 1999) that collaboration (or cooperation) is the crucial outcome of relationship quality in relationship marketing. Efficient collaboration between customer and supplier is supported by strong relational bond encouraged by commitment and trust (Chen et al., 2011; Gounaris, 2005). In shipper-ocean carrier relationships, trust is the fundamental factor of collaboration intention (Wu et al., 2008).

In the conceptual model established with the mediator variable, only direct relationships were hypothesized. The results of the analysis of indirect effects were also examined within the scope of the study. According to the findings, the indirect effects with the highest path coefficient value were the paths from internal capability strategies to collaboration and from internal capability strategies to loyalty, respectively. The indirect effect of customer loyalty strategies on collaboration and loyalty was found to be lower.

The role of the relationship quality as the mediator variable, which consists of the dimensions of trust and commitment in the model, was also tested. In the SEM

analysis performed by removing the mediator variable from the model, it was seen that customer loyalty strategies have a positive and significant relationship on loyalty and collaboration. Likewise, it has been revealed that internal capability strategies have a positive and significant effect on loyalty and collaboration. In the SEM analyzes performed after adding the relationship quality as the mediator variable to the model, it was seen that relationship quality had a fully mediating role in the relationship between relationship marketing strategies and freight forwarder's loyalty. The partial mediation effect of relationship quality on collaboration was revealed in the analysis results. These result confirm that relationship quality is key mediating variable in customer-supplier relationships and necessary for successful relationship marketing (Morgan and Hunt, 1994).

a. Theoretical Implications

The examination of the relationship marketing strategies that are utilized within the maritime logistics industry offers a number of contributions to both the maritime logistics studies and literature of relationship marketing. The research contributes to the existing body of relationship marketing strategies and reveals a new approach from the point of view of the container shipping lines and freight forwarders. Maritime logistics value system is the primary focus of this study, and the relationship marketing strategies that container shipping lines perform are examined from the perspective of freight forwarders. As was said in earlier sections, there has been very little work done to investigate the relationship marketing strategies performed by maritime logistics partners. As a result, this study helps to fill this gap. The impact of relationship marketing strategies on loyalty and collaboration in the maritime logistics business is empirically demonstrated in this study. Thus, the validity and reliability of the scales (customer loyalty strategies scale, internal competency strategies scale, relationship quality scale, loyalty scale and collaboration scale) used in the research were proven with different samples in different country. The results of long-term oriented and customer centric relationship marketing strategies on customer-based relationship outcomes by focusing on maritime logistics value.

b. Managerial Implications

The impact of long-term oriented and customer centric relationship marketing strategies on customer-based relationship outcomes examined by focusing on maritime logistics value. In the maritime logistics industry, the empirical findings have a number of managerial implications. The decision-makers of container shipping lines face difficulties in setting up a successful relationship marketing program. According to our findings, practitioners should categorize their customers based on their profitability and then perform a specific relationship marketing strategy for each. This study is also evidenced that implementing a customer relationship marketing strategy at a higher level will increase the quality of customer relationships and have a significant impact on customer loyalty and collaboration. Supply chain integration will benefit from improved collaboration amongst maritime logistics partners. As a result, the operational and financial results of all stakeholders will improve.

c. Limitations of the Study

First of all, this study examined the supplier-customer relationship between the freight forwarder and the container ship line, which are among the major actors of maritime logistics industry. Other important actors of maritime logistics, ports and terminal operators are excluded from the scope of the study. Examining both dyadic relationships and network relationships between these actors within the scope of relationship marketing will make a significant contribution to the literature. Another relationship that cannot be examined within the scope of the study is the relationship between the container ship line and the shipper. As it is known, other customers of container ship lines are direct shippers. Since it is thought that container ship lines apply different strategies to freight forwarders and direct shippers, the relationship between container shipping lines and direct shippers is considered as a separate study.

The second limitation of the study is related to the variables used in the conceptual model. It is seen in the literature that relationship marketing strategies have many dimensions. However, since we approached the subject from the perspective of the Porter's value chain, other relationship marketing strategies could not be examined

in this study. It is important to investigate in more detail the dimensions such as relationship pricing, loyalty programs, logistics service capability, communication and core service strategy, which are also revealed as a result of qualitative research. In the study, the effect of relationship marketing strategies on loyalty and collaboration, which is considered to be the most important output by customers' side, was investigated. However, it is known that relationship marketing has an impact on other relationship marketing outcomes, such as word of mouth, operational performance, financial performance, through relationship quality as a mediator. These dimensions have not been sufficiently studied in maritime logistics industry.

The third limitation of the study is that its generalizability is limited to container shipping lines and freight forwarders operating in Turkey. The applicability of the relationship marketing strategies examined in the study and the significance of the effects proposed in the conceptual model should also be tested in different countries.

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APPENDICES

APPENDIX 1: Semi-Structured Interview Questionnaire

Questions directed to the Container Shipping Lines

1. Do you care about developing long-term relationships with freight forwarders?
What are the benefits of such a relationship for your business?
2. What relationship marketing practices (e.g. value added services) do container shipping lines perform for freight forwarders to achieve their long-term loyalty?
3. How do you obtain information from freight forwarders and where do you use this information (e.g. customer value analysis)?
4. What does your company do to improve relationships with freight forwarders, considering the organizational capabilities stated below?
 - Technological Capabilities
 - Procedural Capabilities
 - Human Capabilities

Questions directed to the Freight Forwarders

1. Do you care about developing long-term relationships with container shipping lines?
What are the benefits of such a relationship for your business?
2. What relationship marketing practices (e.g. value added services) do container shipping lines you have long-term relationships perform to your business?
3. How do container shipping lines obtain your business' information (personal, shipment etc.)? What are the benefits of sharing information with container shipping lines for your business?
4. Considering the organizational capabilities of container shipping lines stated below, what does container shipping lines perform to improve relationships with your business?
 - Technological Capabilities
 - Procedural Capabilities
 - Human Capabilities

APPENDIX 2: Questionnaire Form (English)

**AN EMPIRICAL ANALYSIS OF RELATIONSHIP MARKETING
STRATEGIES IN THE MARITIME LOGISTICS INDUSTRY**

SECTION 1 – PROFILE QUESTIONS

Title:

Working experience in the logistics industry (year) :

☐1-5 ☐6-10 ☐11-15 ☐16-20 ☐more than 20

Education level:

☐Elementary school ☐High school ☐Associate degree ☐Bachelor's degree
☐Master's degree ☐Doctorate degree

Number of employees (in Turkish branch):

☐1-9 ☐10-49 ☐50-99 ☐100-249 ☐more than 250

Operating year? : ☐1-5 ☐6-10 ☐11-20 ☐more than 20

Cargo Volume?(Estimated):

☐1-5.000 TEU ☐5.001-50.000 TEU ☐more than 50.000 TEU

Ownership Structure :

☐ Pure domestic ☐ Pure foreign ☐ Domestic/foreign partnership

Which of the following companies does your company have cooperation agreements with? (you can tick more than one option);

☐ Container shipping line ☐ Freight forwarder ☐ Customer (exporter/importer)
☐ No agreement

SECTION 2 – RELATIONSHIP MARKETING ITEMS

Please mark your agreement level with each statement below according to the "1-5" agreement levels, which are explained in the box below. Choose a single grade for each statement. When evaluating statements, **consider the container ship line you do the most business with.**

1 Completely disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Completely agree
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	Completely disagree  Completely agree				
	1	2	3	4	5
1. The container shipping line gives priority to long-term customer loyalty.					
2. The container shipping line practices relationship pricing such as discounts on freight rates, deferred payment, and flexibility in demurrage free time.					
3. The container shipping line improves the core product by means of added services or loyalty programs.					
4. The container shipping line provides timely and reliable information to us.					
5. The container shipping line cares about our perceived value, that is our perceived benefits and costs resulting from the provided service.					
6. The container shipping line gives priority to customers with high profitability.					
7. The container shipping line fosters personal and direct contacts between all-level staff and us with the aim of prompt response to our operational and commercial demands.					
8. The container shipping line has sufficient online services (operational/documentation process, online reservation, online pricing, online vessel program, container tracking service, etc.).					
9. The container shipping line widely employs the new information and communication technologies (CRM technologies) to develop close and direct bonds.					
10. The container shipping line's organizational systems, structure, and procedures are specifically tailored to meet our needs.					
11. The container shipping line's procedures are specifically designed to foster service excellence.					
12. The container shipping line analyzes in depth the reasons for customer dissatisfaction (or customer desertion).					
13. The sense of belonging of the container shipping line's employees to their company is high.					
14. Staff stability is an important objective for the container shipping line.					
15. Coordination between the container shipping line's staff at all levels meets our expectations.					
16. The container shipping line's staff willing to meet our requirements (e.g. changing needs).					
17. When we forward our problems and service feedback to the container shipping line's employees, they find solutions for them.					
18. The container shipping line keeps their promises to my company.					
19. The container shipping line is genuinely concerned that our business succeeds.					
20. The container shipping line keeps our best interests in mind.					
21. The container shipping line considers our welfare as their own.					
22. The container shipping line is trustworthy.					
23. We are very committed to relationship.					
24. We intend to maintain indefinitely.					
25. We continue working with the container shipping line.					

	Completely disagree Completely agree				
	1	2	3	4	5
26. We genuinely enjoy our relationship with the container shipping line.					
27. We like being associated with the container shipping line.					
28. My company considers the container shipping line as our first choice.					
29. My company would recommend the container shipping line's services to other companies.					
30. My company would encourage others to use the service of the container shipping line.					
31. My company has positive things to say about the container shipping line.					
32. The container shipping line exploits unique opportunities in the market with us.					
33. We find synergistic ways to do business together.					
34. The container shipping line works together to develop new ideas with us.					
35. We continually share proprietary information mutually.					

**DENİZ YOLU LOJİSTİĞİ SEKTÖRÜNDE İLİŞKİSEL PAZARLAMA
STRATEJİLERİNİN AMPİRİK BİR ANALİZİ**

Sayın Yetkili,

Dokuz Eylül Üniversitesi, Sosyal Bilimler Enstitüsü, Denizcilik İşletmeleri Yönetimi Anabilim Dalı, Doktora Programı çerçevesinde **Dr. Öğr. Üyesi Gamze ARABELEN** danışmanlığında, **Arş. Gör. Resul TEPE** tarafından “**Deniz Yolu Lojistiği Sektöründe İlişkisel Pazarlama Stratejilerinin Ampirik Bir Analizi**” başlıklı doktora tezinde uygulamaya yönelik bir anket hazırlanmıştır. Deniz yolu lojistik endüstrisinin ana aktörlerinden olan konteyner gemi hatları ve taşıma işleri organizatörleri (freight forwarders) arasındaki ilişkiyi temel alan bu çalışma sektördeki ilişkisel pazarlama uygulamaları için bir çerçeve oluşturmayı amaçlamaktadır. Çalışmanın diğer bir amacı, ilişkisel pazarlama uygulamaları üzerinden tedarik zinciri ortaklarının birbirleriyle olan ilişkilerini araştırmak ve ilişki kalitesi boyutlarını bir aracı olarak kullanarak bu uygulamaların müşteri sadakati ve işbirliği üzerindeki etkisini ortaya çıkarmaktır.

Anket çalışması 5-10 dakikanızı alacaktır. **Araştırma kapsamında elde edilen bilgiler sadece bilimsel amaçlı kullanılacak olup, sonuçları herhangi bir yanıtlayıcıyla ilişkilendirilmeyecektir.** Ülkemizin lojistik sektörüne katkı sağlayacağını düşündüğümüz bu çalışmaya sağladığınız değerli bilgi ve katılımlarınız için teşekkür eder, çalışmalarınızda kolaylıklar dilerim.

Saygılarımla,

Arş. Gör. Resul TEPE,

1. BÖLÜM - PROFİL SORULARI

Kurumdaki göreviniz:Metin girmek için buraya tıklayın veya dokununuz.

Kaç yıldır lojistik sektöründe görev yapmaktasınız? : ☐1-5 ☐6-10 ☐11-15

☐16-20 ☐20'den fazla

Öğrenim durumunuz: ☐İlköğretim ☐Lise ☐Ön lisans ☐Lisans ☐Yüksek lisans ☐Doktora

Şirketinizin çalışan sayısı (Türkiye ofislerinde): ☐1-9 ☐10-49 ☐50-99

☐100-249 ☐250 ve üzeri

Şirketiniz kaç yıldır faaliyetini sürdürmektedir? : ☐1-5 ☐6-10 ☐11-20

☐20'den fazla

Şirketinizin yıllık yük hacmi ne kadardır?(Tahmini): ☐1-5.000 TEU ☐5.001-50.000 TEU ☐50.000 TEU' dan fazla

Şirketinizin ortaklık/sahiplik yapısı:☐ Tamamen yerli ☐ Tamamen yabancı ☐ Yerli/Yabancı ortaklı

Şirketinizin aşağıda belirtilen işletmelerden hangisiyle/hangileriyle işbirliği anlaşması vardır? (birden fazla seçeneği işaretleyebilirsiniz);

☐ Konteyner gemi hattıyla ☐ Freight forwarder işletmesiyle ☐Müşteriyle (ithalatçı/ihracatçı) ☐Anlaşmamız yoktur

2. BÖLÜM - İLİŞKİSEL PAZARLAMA İFADELERİ

Aşağıda yer alan her bir ifadeye katılmama veya katılım derecelerinizi aşağıdaki kutuda açıklaması verilen “1-5 arası” katılım derecelerine göre işaretleyiniz. Her bir ifade için tek bir dereceyi seçiniz. **İfadeleri değerlendirirken en çok iş yaptığınız**

konteyner gemi hattını dikkate alınız.

1 Kesinlikle Katıl ~~mı~~ yorum	2 Katıl ~~mı~~ yorum	3 Ne Katılıyorum Ne Katıl ~~mı~~ yorum	4 Katılıyorum	5 Kesinlikle Katılıyorum
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	Kesinlikle Katılmıyorum				Kesinlikle Katılıyorum	
	1	2	3	4	5	
1.Çalıştığımız hat uzun dönemli müşteri sadakatine öncelik verir.						
2.Çalıştığımız hat uzun dönemli müşterilerine finansal kolaylıklar (navlun oranlarında indirim, vadeli ödeme ve demurajda esneklik vb.) sağlar.						
3.Çalıştığımız hat, ek hizmetler veya sadakat programları (yüklemelerde öncelik, ekipman sağlama vb.) aracılığıyla bize verdiği ana hizmeti iyileştirir.						
4.Çalıştığımız hat bize zamanında ve doğru bilgi akışı sağlar.						
5.Çalıştığımız hat sunduğu hizmetten elde ettiğimiz değeri, yani algıladığımız fayda ve maliyetlerimizi araştırır.						
6.Çalıştığımız hat karlılığı yüksek müşterilerine öncelik verir.						
7.Çalıştığımız hattın üst yönetimi operasyonel ve ticari taleplerimize hızlı yanıt vermek amacıyla her seviyedeki personeli ile aramızda kişisel ve doğrudan temasların kurulmasını sağlar.						
8.Çalıştığımız hattın sunduğu çevrim içi (online) hizmetler (operasyon/dokümantasyon süreci, çevrimiçi rezervasyon, konteyner takip hizmeti vb.) yeterlidir.						
9.Çalıştığımız hat şirketimizle yakın ve doğrudan bağlar geliştirmek için mevcut bilgi ve iletişim teknolojilerini (Müşteri ilişkileri yönetimi/CRM teknolojileri) yaygın olarak kullanır.						
10.Çalıştığımız hattın örgüt sistemi, örgütsel yapısı ve hizmet yönlü prosedürleri (problem çözme, hizmet iyileştirme vb.) ihtiyaçlarımızı karşılamada yeterlidir.						
11.Çalıştığımız hattın şirket prosedürleri (problem çözme, hizmet iyileştirme vb.) hizmette mükemmelliğe ulaşmayı sağlar.						
12.Çalıştığımız hat müşteri memnuniyetsizliğinin nedenlerini araştırır.						
13.Çalıştığımız hattın personelinin, şirketlerine aidiyet duygusu yüksektir.						
14. Personel istikrarı, çalıştığımız konteyner nakliye hattı için önemli bir hedeftir.						
15. Çalıştığımız hattın, departmanları arasındaki uyum beklentilerimizi karşılar.						
16. Çalıştığımız hattın personeli gereksinimlerimizi (değişen ihtiyaçlarımız vb.) karşılamaya isteklidir.						
17. Sorunlarımızı ve hizmet geri bildirimlerimizi çalıştığımız hattın personeline ilettiğimizde, sorunlarımızı çözer.						
18. Çalıştığımız hat taahhütlerini yerine getirir.						
19.Çalıştığımız hat beraber gerçekleştirdiğimiz işlerin başarılı olmasını önemser.						
20. Çalıştığımız hat şirketimizin çıkarlarını gözetir.						
21. Çalıştığımız hat şirketimizin refahını kendi refahı olarak görür.						
22. Çalıştığımız hat güvenilirdir.						
23. Çalıştığımız hatla olan ilişkimize çok bağlıyız.						
24. Çalıştığımız hatla olan ilişkimizi gelecekte de sürdürmekte kararlıyız.						
25. Çalıştığımız hatla iş yapmaya devam ediyoruz.						
26. Çalıştığımız hatla olan ilişkimizden gerçekten memnunuz.						
27. Çalıştığımız hatla birlikte anılmayı seviyoruz.						
28. Şirketim bu hattı deniz yolu taşımacılığı için ilk tercihi olarak görüyor.						
29. Şirketim bu hattın sağladığı hizmetleri diğer şirketlere de <u>tavsiye</u> eder.						

	Kesinlikle Katılmıyorum				Kesinlikle Katılıyorum	
	1	2	3	4	5	
30. Şirketim, diğer şirketleri de bu hattın sağladığı hizmetleri kullanmaya <u>teşvik eder.</u>						
31. Şirketim bu hat hakkında olumlu şeyler söyler.						
32. Çalıştığımız hat pazardaki benzersiz fırsatlardan bizimle birlikte yararlanır.						
33. Çalıştığımız hat ile birlikte iş yapmanın sinerjik yollarını buluruz.						
34. Çalıştığımız hat sağladığı hizmetlerle ilgili yeni fikirler geliştirmek için bizimle birlikte çalışır.						
35. Çalıştığımız hat ile iş yapmamız için gerekli özel bilgileri karşılıklı olarak sürekli paylaşıyoruz.						

Görüş ve Öneriler

Eklemek istediğiniz bir bilgi veya öneriniz var mı?

APPENDIX 4: Mahalanobis Distance (Outliers)

RMS			RQ			RO		
NO	mah	p value	NO	mah	p value	NO	mah	p value
68	52.32934	0	53	47.85018	0	68	48.8988	0
53	51.09669	0	68	33.08527	0.0003	131	24.80385	0.0017
6	46.86644	0.0001	6	32.82559	0.0003	179	22.68638	0.0038
33	37.99258	0.0025	3	27.08942	0.0025	28	22.54073	0.004
21	36.66497	0.0037	80	26.23941	0.0034	18	22.47814	0.0041
27	36.635	0.0038	27	26.16547	0.0035	94	22.23986	0.0045
69	34.642	0.0069	58	25.48866	0.0045	27	20.88516	0.0075
45	32.95606	0.0114	11	24.88135	0.0056	198	20.82865	0.0076
107	32.46548	0.0132	180	24.59021	0.0062	9	20.81408	0.0077
8	32.3979	0.0134	81	24.40769	0.0066	81	20.67534	0.0081
103	32.13118	0.0145	97	23.64645	0.0086	180	20.42316	0.0088
15	31.92354	0.0154	45	23.38365	0.0094	7	20.19366	0.0096
179	31.90989	0.0154	85	23.37355	0.0094	87	20.13178	0.0098
110	31.82181	0.0158	7	20.98646	0.0212	13	19.5332	0.0123
3	31.67955	0.0165	9	20.8348	0.0223	166	18.86283	0.0156
180	31.37127	0.018	192	20.33895	0.0262	29	18.76295	0.0162
41	31.1078	0.0194	48	20.28336	0.0267	148	18.71948	0.0164
48	31.01348	0.0199	95	19.56445	0.0337	2	18.12686	0.0203
28	30.64792	0.022	99	19.36976	0.0358	95	17.64547	0.024
22	30.58755	0.0224	82	18.98625	0.0404	22	17.38986	0.0263
104	30.05042	0.026	17	18.90348	0.0415	44	17.12147	0.0289
85	29.95644	0.0267	24	18.81211	0.0427	48	16.95463	0.0306
97	29.74727	0.0282	87	18.80466	0.0428	82	16.64244	0.0341
18	29.1914	0.0328	12	18.78388	0.0431	62	16.55364	0.0351
67	28.89029	0.0356	156	18.36278	0.0491	119	16.35249	0.0376
82	28.81429	0.0363	167	18.13874	0.0527	156	15.95805	0.043
99	28.51771	0.0392	128	16.94595	0.0756	97	15.94838	0.0431
9	28.336	0.0412	166	16.66515	0.0821	66	15.90033	0.0438
62	27.89285	0.0462	179	16.3917	0.089	164	15.8641	0.0444
57	27.46676	0.0516	66	15.98256	0.1001	58	14.6427	0.0665
184	26.63633	0.0636	15	15.83485	0.1045	167	14.47782	0.0701
2	26.20537	0.0708	69	15.78929	0.1058	74	14.1796	0.0772
124	25.83286	0.0776	153	15.48862	0.1152	10	14.0759	0.0798
88	25.33379	0.0875	33	15.37335	0.119	190	13.7496	0.0885
167	25.25033	0.0892	2	15.23734	0.1236	185	13.60211	0.0927
23	24.85117	0.0981	28	15.2128	0.1245	33	13.2656	0.103

RMS			RQ			RO		
NO	mah	p value	NO	mah	p value	NO	mah	p value
123	24.72401	0.1011	4	15.08888	0.1289	187	13.1923	0.1054
166	24.52786	0.1058	67	15.03752	0.1307	11	13.09442	0.1086
10	23.98315	0.1199	52	14.82638	0.1385	23	13.07358	0.1093
52	23.92263	0.1216	197	14.80518	0.1393	25	13.05324	0.11
94	23.82776	0.1242	26	14.2308	0.1627	103	12.9895	0.1122
19	23.76134	0.1261	188	14.08354	0.1692	12	12.87732	0.1161
190	23.58224	0.1312	44	14.08156	0.1693	80	12.82067	0.1182
5	23.31827	0.1392	184	13.574	0.1933	53	11.91732	0.1549
128	23.14635	0.1445	131	13.52715	0.1957	73	11.83202	0.1589
4	23.10284	0.1459	23	13.18986	0.2132	129	11.75048	0.1627
11	23.02097	0.1486	59	12.77246	0.2367	34	11.45006	0.1775
29	22.83579	0.1547	31	12.66245	0.2432	49	11.27724	0.1865
24	22.72307	0.1585	32	12.66245	0.2432	147	11.24557	0.1882
89	22.66892	0.1603	22	12.61939	0.2457	64	11.2035	0.1904
31	21.86004	0.1902	194	12.50023	0.253	184	11.14353	0.1937
32	21.86004	0.1902	34	12.39152	0.2597	6	10.75278	0.2161
118	21.84411	0.1908	198	12.34355	0.2627	3	10.75278	0.2161
65	21.62433	0.1996	40	12.29253	0.266	181	10.72278	0.2179
202	21.33433	0.2117	37	12.2882	0.2662	24	10.52395	0.2302
170	21.08402	0.2226	72	12.27439	0.2671	183	10.43727	0.2357
199	20.81653	0.2346	38	12.06465	0.2808	150	10.29974	0.2446
153	20.05199	0.2716	104	12.02272	0.2835	109	10.05635	0.2611
13	19.82551	0.2833	89	11.99151	0.2856	168	10.05033	0.2615
71	19.49638	0.3008	21	11.90935	0.2912	72	9.90366	0.2719
56	19.27113	0.3132	178	11.8564	0.2948	118	9.89888	0.2722
34	19.13227	0.321	74	11.7655	0.3011	85	9.80443	0.279
142	19.07099	0.3245	29	11.56446	0.3153	41	9.73465	0.2841
1	18.61139	0.3513	151	11.38978	0.328	174	9.67138	0.2889
35	18.48552	0.3588	13	11.3669	0.3297	197	9.58943	0.295
43	18.43136	0.3621	133	11.095	0.3502	99	9.5728	0.2963
66	18.35509	0.3668	106	11.0382	0.3545	39	9.42384	0.3078
75	18.18979	0.377	174	10.95495	0.361	101	9.19182	0.3264
152	18.12254	0.3812	170	10.73829	0.3783	76	9.00037	0.3423
44	18.09255	0.383	195	10.72531	0.3793	123	8.97734	0.3442
79	18.05132	0.3856	1	10.70716	0.3808	67	8.82304	0.3574
133	17.94577	0.3923	76	10.62207	0.3877	69	8.82037	0.3577
197	17.91179	0.3944	16	10.61417	0.3884	21	8.76588	0.3624
195	17.81192	0.4008	56	10.54238	0.3943	144	8.75352	0.3635
134	17.77635	0.4031	150	10.51696	0.3964	37	8.73721	0.3649
160	17.66304	0.4104	149	10.49913	0.3978	136	8.63941	0.3736

RMS			RQ			RO		
NO	mah	p value	NO	mah	p value	NO	mah	p value
113	17.65344	0.411	25	10.31346	0.4134	122	8.47591	0.3884
87	17.64462	0.4116	196	10.27746	0.4165	199	8.33531	0.4014
196	17.55091	0.4177	62	10.26277	0.4177	203	8.29301	0.4054
185	17.53782	0.4185	91	10.22465	0.421	175	8.27388	0.4072
122	17.53155	0.419	98	10.21031	0.4222	75	8.24178	0.4102
112	17.36569	0.4299	65	10.15187	0.4273	195	8.19786	0.4144
58	17.35654	0.4305	79	10.07731	0.4337	15	7.92143	0.4412
135	17.32148	0.4328	125	9.98302	0.442	98	7.82928	0.4503
50	17.26544	0.4365	148	9.7912	0.459	128	7.82634	0.4506
131	17.19283	0.4414	5	9.62235	0.4742	162	7.69299	0.464
156	17.02754	0.4525	199	9.6166	0.4747	17	7.58392	0.4751
80	17.0124	0.4535	49	9.56619	0.4793	133	7.50971	0.4828
141	17.00749	0.4539	137	9.53434	0.4823	110	7.48566	0.4853
16	16.94998	0.4578	141	9.51781	0.4838	115	7.47751	0.4861
158	16.69265	0.4754	41	9.48515	0.4868	50	7.28106	0.5066
164	16.49516	0.489	123	9.47819	0.4874	134	7.1738	0.518
73	16.48037	0.4901	83	9.37936	0.4965	5	7.15087	0.5204
114	15.92088	0.5295	71	9.24453	0.5091	104	6.82648	0.5555
193	15.87519	0.5327	144	9.13671	0.5192	151	6.80265	0.5581
47	15.84596	0.5348	10	9.06679	0.5258	192	6.69034	0.5704
151	15.74402	0.542	193	8.79315	0.5518	152	6.66082	0.5736
95	15.6277	0.5504	57	8.77859	0.5532	42	6.6295	0.5771
115	15.45124	0.563	78	8.70288	0.5605	16	6.52533	0.5886
198	15.37877	0.5682	191	8.66429	0.5642	89	6.47156	0.5946
100	15.37678	0.5684	50	8.47012	0.583	125	6.42638	0.5996
188	15.13088	0.5861	164	8.4543	0.5846	52	6.40731	0.6017
143	15.09102	0.5889	147	8.41039	0.5888	153	6.30183	0.6135
200	15.06891	0.5905	127	8.29775	0.5998	200	6.28473	0.6154
204	15.04642	0.5921	134	8.24898	0.6045	194	6.26676	0.6174
12	15.0182	0.5942	20	7.87674	0.6409	120	6.22392	0.6222
192	14.99315	0.596	203	7.63577	0.6644	188	6.07659	0.6387
37	14.98113	0.5968	120	7.60048	0.6678	45	6.04876	0.6418
102	14.97171	0.5975	107	7.58315	0.6695	196	5.64532	0.6869
125	14.94763	0.5993	18	7.48461	0.679	107	5.57881	0.6943
14	14.80995	0.6092	36	7.43843	0.6835	59	5.53882	0.6987
161	14.66936	0.6193	154	7.37812	0.6893	149	5.3234	0.7225
201	14.5865	0.6252	88	7.30534	0.6963	1	5.2684	0.7285
36	14.52381	0.6297	30	7.28821	0.698	51	5.26602	0.7288
91	14.35495	0.6418	129	7.285	0.6983	57	5.20767	0.7352
129	14.33601	0.6432	73	7.2454	0.7021	43	5.20767	0.7352

RMS			RQ			RO		
NO	mah	p value	NO	mah	p value	NO	mah	p value
174	14.27437	0.6476	86	7.19901	0.7065	170	5.00348	0.7572
186	14.1576	0.6559	140	7.11704	0.7144	56	4.97573	0.7602
63	14.12672	0.6581	187	6.94108	0.731	130	4.94587	0.7633
205	14.03719	0.6645	92	6.92925	0.7321	172	4.67724	0.7915
74	13.94174	0.6712	190	6.82931	0.7415	145	4.63089	0.7962
109	13.79843	0.6813	202	6.74964	0.7489	83	4.63068	0.7962
7	13.71389	0.6872	204	6.74964	0.7489	140	4.62913	0.7964
111	13.65659	0.6912	201	6.74964	0.7489	202	4.62913	0.7964
154	13.63964	0.6924	205	6.74964	0.7489	204	4.62913	0.7964
178	13.62208	0.6936	206	6.74964	0.7489	201	4.62913	0.7964
26	13.56532	0.6976	207	6.74964	0.7489	205	4.62913	0.7964
130	13.56529	0.6976	208	6.74964	0.7489	206	4.62913	0.7964
64	13.55789	0.6981	109	6.71901	0.7517	207	4.62913	0.7964
203	13.40356	0.7088	19	6.7161	0.7519	208	4.62913	0.7964
51	13.38402	0.7101	43	6.69874	0.7535	137	4.5616	0.8032
84	13.32573	0.7141	14	6.69394	0.754	38	4.42521	0.8169
38	13.1404	0.7267	159	6.63109	0.7598	20	4.37829	0.8215
148	13.0307	0.7341	124	6.40741	0.78	8	4.37829	0.8215
17	13.00693	0.7357	102	6.40232	0.7804	138	4.35443	0.8238
120	12.98704	0.7371	176	6.36787	0.7835	143	4.29089	0.83
194	12.74174	0.7533	152	6.35777	0.7844	113	4.2181	0.8369
181	12.23623	0.7856	177	6.32063	0.7876	132	4.04318	0.8532
83	11.88103	0.8073	181	6.29107	0.7902	146	3.99864	0.8572
162	11.86776	0.8081	138	6.26263	0.7927	176	3.98412	0.8586
137	11.74216	0.8155	110	6.24835	0.794	46	3.93936	0.8626
189	11.69303	0.8184	160	6.23668	0.795	154	3.92821	0.8635
92	11.59443	0.824	8	6.14061	0.8033	14	3.90609	0.8655
77	11.51154	0.8288	121	5.98154	0.8168	117	3.83967	0.8713
187	11.42272	0.8338	103	5.97298	0.8175	121	3.81041	0.8738
78	11.37389	0.8365	51	5.94114	0.8202	71	3.80559	0.8742
42	11.35463	0.8375	39	5.91866	0.8221	61	3.80559	0.8742
25	11.20703	0.8456	171	5.86737	0.8263	40	3.80193	0.8745
90	11.19094	0.8465	185	5.79371	0.8323	90	3.74047	0.8797
72	11.15005	0.8487	200	5.79371	0.8323	182	3.73556	0.8802
177	11.01693	0.8557	35	5.76392	0.8347	26	3.6607	0.8864
157	10.94463	0.8594	75	5.74812	0.836	124	3.62457	0.8893
191	10.85672	0.8639	143	5.5779	0.8494	141	3.60653	0.8908
96	10.8326	0.8651	61	5.57055	0.85	96	3.56041	0.8945
30	10.82386	0.8656	130	5.54915	0.8516	158	3.4315	0.9044
86	10.81631	0.866	116	5.51426	0.8543	161	3.4315	0.9044

RMS			RQ			RO		
NO	mah	p value	NO	mah	p value	NO	mah	p value
46	10.40528	0.8858	168	5.5139	0.8543	77	3.25547	0.9173
76	10.3519	0.8882	165	5.4241	0.8611	63	3.25547	0.9173
150	10.01695	0.9029	77	5.40263	0.8627	86	3.24342	0.9182
39	9.94863	0.9058	163	5.35068	0.8666	114	3.24342	0.9182
116	9.9347	0.9063	42	5.09417	0.8848	111	3.12337	0.9264
206	9.8624	0.9093	139	5.06414	0.8869	4	3.08759	0.9287
138	9.83491	0.9104	105	4.98177	0.8924	30	3.08759	0.9287
54	9.72365	0.9148	122	4.87112	0.8996	19	3.08759	0.9287
61	9.68789	0.9162	111	4.836	0.9019	126	3.08161	0.9291
159	9.62326	0.9187	118	4.81744	0.903	35	3.05004	0.9312
147	9.47788	0.9241	182	4.81744	0.903	116	3.05004	0.9312
126	9.30495	0.9302	183	4.7008	0.9102	47	3.05004	0.9312
139	9.30252	0.9303	119	4.67082	0.9121	92	3.0499	0.9312
20	9.09282	0.9373	146	4.63134	0.9144	163	3.04867	0.9313
132	8.89751	0.9434	64	4.62602	0.9147	91	3.0478	0.9313
144	8.75348	0.9477	100	4.53587	0.92	159	2.9724	0.9361
121	8.71435	0.9488	96	4.53587	0.92	65	2.94526	0.9377
108	8.42729	0.9565	54	4.53587	0.92	36	2.94526	0.9377
119	8.37653	0.9578	101	4.53587	0.92	173	2.92008	0.9393
106	8.32254	0.9592	46	4.38463	0.9283	191	2.894	0.9408
49	8.29648	0.9598	63	4.32934	0.9313	139	2.85476	0.9431
117	8.18817	0.9624	70	4.25909	0.9349	160	2.84129	0.9439
146	8.18086	0.9625	84	4.22196	0.9368	177	2.82212	0.945
172	8.02362	0.966	90	4.15277	0.9402	105	2.79301	0.9467
207	8.01518	0.9662	55	4.07609	0.9438	171	2.57149	0.9583
208	8.01518	0.9662	172	3.9755	0.9484	60	2.57149	0.9583
140	7.84397	0.9698	47	3.88963	0.9522	169	2.57149	0.9583
40	7.8413	0.9698	60	3.77907	0.9568	108	2.46827	0.9632
136	7.81697	0.9703	135	3.76697	0.9572	112	2.46827	0.9632
55	7.76672	0.9713	117	3.76697	0.9572	135	2.29977	0.9704
155	7.75875	0.9714	94	3.65441	0.9616	189	2.14795	0.9761
163	7.63945	0.9737	169	3.64547	0.9619	88	2.1211	0.9771
98	7.42469	0.9774	93	3.57432	0.9645	70	2.11273	0.9774
165	7.39203	0.9779	108	3.30139	0.9734	127	1.72214	0.9884
145	7.14017	0.9817	158	3.12565	0.9783	178	0.89431	0.9988
81	6.79265	0.9861	161	3.05128	0.9802	193	0.89431	0.9988
101	6.70806	0.987	115	2.96727	0.9822	165	0.89431	0.9988
182	6.57455	0.9884	162	2.83928	0.985	93	0.89431	0.9988
127	6.5129	0.989	173	2.83928	0.985	142	0.89431	0.9988
183	6.36329	0.9904	142	2.7168	0.9873	186	0.89431	0.9988

RMS			RQ			RO		
NO	mah	p value	NO	mah	p value	NO	mah	p value
149	6.19674	0.9918	186	2.7168	0.9873	157	0.89431	0.9988
176	6.16987	0.992	189	2.7168	0.9873	155	0.89431	0.9988
60	6.05528	0.9928	157	2.7168	0.9873	31	0.66997	0.9996
175	6.05128	0.9928	155	2.7168	0.9873	32	0.66997	0.9996
70	5.95572	0.9935	175	2.7168	0.9873	106	0.66997	0.9996
173	5.39588	0.9964	114	2.34451	0.993	79	0.66997	0.9996
168	4.96106	0.9979	145	2.34451	0.993	78	0.66997	0.9996
105	3.89766	0.9996	113	2.16625	0.9949	102	0.66997	0.9996
171	3.69216	0.9997	112	2.16625	0.9949	100	0.66997	0.9996
59	3.53529	0.9998	126	1.71476	0.9981	54	0.66997	0.9996
169	3.26791	0.9999	132	1.71476	0.9981	84	0.66997	0.9996
93	2.35818	1	136	1.71476	0.9981	55	0.66997	0.9996