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Does it really worth investing in relationship marketing for a port business?

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ABSTRACT

Container terminals have been facing intense competition and continuously changing environment due to some forces such as strategic alliances, privatization, overlapping hinterlands, and global terminal operators. To justify high investment and operation costs and to achieve profitability container terminals must attain satisfactory cargo volumes. Practically, physical investments and cooperation among ports are current ways that ports struggle with new forces in the container transportation market. In addition, customer loyalty is an important asset for a port to ensure adequate flows. This study investigated the impacts of relationship marketing tactics on container terminals' financial and non-financial performance indicators. The data was collected from 24 container terminals located in Turkey (134 responses) and analyzed through multilevel structural equation modeling. Based on the results our core conclusion is that the more a port implements relational marketing tactics, the higher the quality of the relationship with the customer, which then returns to it as the performance of the customer relationship and consequently the financial performance.

1. Introduction

Being customer-centric, and market-oriented, and focusing on relationships instead of transaction-based interactions have been seen as the new trends, a further absolute must, to survive in a competitive environment in the trade arena. The motivation of this study stems from the desire of revealing the importance of relationship development, in conjunction with being customer-centric in the port industry. Relationship development is handled from the viewpoint of relationship marketing (RM) which consists of marketing efforts to build and develop relationships.

Relationship marketing has been gaining remarkable importance especially in the service industry since the RM concept and related studies are mostly about service quality and customer satisfaction (Gummesson, 1994; Payne, 1994). When it was shown by some studies that finding new customers is more expensive than the keeping existing ones (Reichheld and Ve Sasses, 1990; Dean and Evans, 1994), the importance of RM has scaled up. In the port industry, there has been growing interest in revealing non-price competition issues to gain competitive advantage while maximizing customer satisfaction (Schellinck and Brooks, 2016; Esmer et al., 2016). Correspondingly, this research focuses on the impacts of relationship marketing applications of ports on their performances.

An RM strategy involves all the activities that prevent the disruption of the relationship, and also that trigger the development of the relationship with the customer. The main purpose of RM efforts is keeping existing customers rather than attracting new customers. Especially in the port industry, it is well known that at the first stage in port selection process, carriers mostly focus on market size of the hinterland, location and the physical condition of the port (Chang et al., 2008), while shippers take into consideration the frequency of sailings and port charges (Slack, 1985). It would be not an efficient way to attract new customers with social marketing programs or by offering structural relationships. So, RM is different from the 4p or 7p marketing process.

There is no need to increase the awareness of the port customers because, in the port industry, which is an industrial market, the level of customers' knowledge is already very high compared to the consumer markets.

That's why focusing on relationship development by offering high service quality while meeting the customer needs could be an efficient way to prevent port customers from calling another port with more attractive locations or handling charge.

In this research, with a sampling of container terminals located in Turkey, the impacts of RM on port performance were analyzed through multilevel structural equation modeling (MSEM). The port performance was measured with financial performance and customer relationship performance indicators.

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2. Relationship marketing and the theoretical model

In the literature, there is not any systemized definition and context for relationship marketing concept (Morris et al., 1998). The first definition of relationship marketing (RM) belongs to Berry (1983:26). He defined relationship marketing as "attracting, maintaining, and enhancing customer relationships". Morgan and Hunt (1994) indicated RM as all marketing activities/applications for attracting more profitable customers, developing and maintaining relationships with them. Grönroos (1994)'s definition involves rather a specific expression where we can understand the content of RM instead of its aim. He defined relationship marketing as mutual exchange and fulfillment of promises to enhance and terminate relationships with customers where the goals of both parties are met. Ballantyne (1994) handled RM in the context of a supply chain. The author signified the aim of RM as building relationships to provide continuous and stable links in the supply chain. Paravatiyar (1996) focused on the cooperation while defining RM. When we look at the definitions of all these academics who have a say in relationship marketing, we see that it is not possible to give a single general definition because the purpose and content of relationship marketing vary according to the industry, country, individual and company in which it is used.

To build, develop and maintain long term and high quality relations with customers, it is required to develop and perform some customer-focused relationship marketing strategies. Relationship marketing strategy consists of relationship marketing tactics and relationship quality. Several academics handled relationship marketing tactics [sometimes called relationship marketing activities, or programs (e.g. Palmatier et al., 2007), or bonds (e.g. Berry, 1995; Campbell et al., 2006)] as antecedents of relationship quality (e.g. Morgan and Hunt, 1994; Moorman et al., 1992; Kalafatis and Miller; 1997; Kim et al.2001; De Wulf et al., 2001). Relationship quality involves trust and commitment behavioral attributes as mentioned in trust-commitment theory (Morgan and Hunt, 1994). Relationship marketing tactics are divided into three levels (Berry, 1995); level one-financial RM, level two-social RM, and level three-structural RM. The higher levels of RM mean deepen relationships between buyer and seller. Even some authors refer third level (structural RM) as a strategic partnership (e.g. Morris et al., 1998).

Relationship quality stands for showing the trust and commitment level of the customer in the seller's future performance (Crosby et al., 1990). According to the trust and commitment theory relationship quality is known as a mediator in the model of relationship marketing (Morgan and Hunt, 1994; Palmatier et al., 2007). Trust and commitment as mediators are shaped by diverse precursors (e.g. communication and shared values) and result in several outcomes (e.g. loyalty, cooperation, financial performance/Morgan and Hunt, 1994).

The foundation of the theoretical model of this study is based on the notable academic studies which establish empirically that relationship marketing investments lead to superior seller performance (e.g. Moorman et al., 1992; Morgan and Hunt, 1994; Naidu et al., 1999; Sirdeshmukh et al., 2002; Palmatier and Gopalakrishna, 2005; Palmatier et al., 2006). Based on the literature and on the commitment-trust theory of RM, in this research, relationship quality is handled as the mediator between relationship marketing tactics and port performance. Fig. 1 depicts the theoretical model of this study.

3. Relationship marketing in port industry and hypotheses

3.1. Financial RM tactics

A discount in port charge is the first thing that comes to mind when it comes to financial benefits that can be provided by a port to its customers. A port charge is composed of several service expenses such as loading/unloading costs, infrastructure, documentation, ISPS, anchorage, navigation, supervision, customs freight notification, pilots, moorage, and tug. In addition to the discount, they are also financial RM tactics to provide a payment term, incentives, and free services (Caliskan and Esmer, 2016). Deferred payment opportunities can be offered according to the business transaction frequency, the credit score of the customer, cargo volume, or request on guarantee letter. Moreover, the port can provide free services by excusing the customer from extra charges or by providing advantages for the customer at the same price. Another financial benefit of ports is to offer incentives according to the type of cargo, type of transport (e.g. export, import, domestic, transshipment) or transport vehicle.

The port industry considers port charging as an important marketing pillar in building competitiveness (Haralambides et al., 2002; Esmer et al., 2016). In the literature, the effect of port charges on the port attractiveness and competitiveness is a matter of debate. Some authors (e.g. Bichou and Bell, 2007; Lavissiere, 2018) do not think that the money paid to the port is a factor that is taken into account in port selection since it has a very small share in the total cost. On the contrary, some authors argue that the port price has an important place in the port selection criteria. In many studies looking at the port selection criteria from the point of view of the ocean carriers, the port charge has emerged as an important factor affecting the decision to call a port (e.g. Guy and Urli, 2006; Tongzon and Sawant, 2007; Chang et al., 2008; Yang et al., 2016). There are also studies that examine the port selection criteria of shippers and find the port charge important (e.g. Guy and Urli, 2006; Tongzon, 2009; Steven and Corsi, 2012).

It would be more appropriate to discuss whether the price is effective according to the location of the port and the market characteristic in which it operates. For example, pricing policies will be different in areas of high competition, such as the Mediterranean Sea and North Range. In addition, different market characteristics (e.g. monopoly, duopoly, and oligopoly) will have different effects on port pricing strategies (Acciaro, 2013).

In the literature, it is said that ocean carriers rather than shippers are not sensitive to the port charges since they determine the prices. But there is an important issue to be considered here. As a result of long negotiations, carriers receive a special price from the ports. But in return, they sign a long-term contract and shall guarantee that they call this port during the term specified in the contract. In this case, the port ensures its long-term throughput. Based on this argument, the following hypothesis is formulated:

Hypothesis 1. *Financial RM tactics have a positive impact on relationship quality.*

3.2. Social RM tactics

Social relations between the client and the company are critical to the evolution of relationship, trust and commitment, and commercial transactions. In some cultures (e.g. Chinese culture), social relations is an important resource for developing partnerships between firms and gaining competitive advantage. Social bonds between buyer and seller increase trust. Because of these bonds, opportunistic behaviors are reduced and the exchange of information increases. Together with trust, these bonds raise the commitment, because a long-term and close relationship is established with cooperation (Cheng, 2011). According to Peters (2001), personal selling, and a one-to-one relationship with customers should be the basic marketing communication activities of a port because personal communication is the basic essence of industrial marketing. To be in constant communication with the customers through telephone calls and visiting, to pay more attention to regular customers than non-regular customers, to remember and celebrate special days, to develop social responsibility projects with customers, to interact socially by participating in events, to give prompt response to complaints and demands, to be polite, kind and being friendly are social activities that a port can implement in order to establish a social tie with customers (Caliskan and Esmer, 2016, 2017). Ugboma et al.

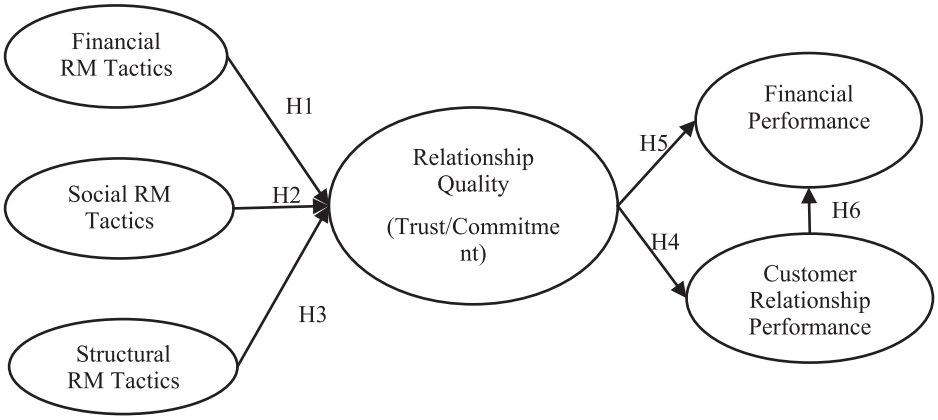

Fig. 1. Theoretical research model.

(2007) found that relational dimensions such as individual attention and complaint handling of a commercial port have the greatest influence on customer satisfaction.

Trust and commitment cannot be expected in the newly established and not yet socially invested relationships. In socially developed relations, trust and commitment are formed and the parties involved are now familiar with each other's operational procedures and expectations (Fichman and Levinthal, 1991). Thus, the following research hypothesis is proposed:

Hypothesis 2. *Social RM tactics have a positive impact on relationship quality*.

3.3. Structural RM strategies

Structural RM tactics are applications of what Brooks and Schellinck (2015) call the 'responsiveness of port authority or terminal operator to special requests of customers' or the 'ability of the port to provide tailored services to different interests' which they assert are important sources of port users' satisfaction and commitment. The basic structural RM tactics implemented by the ports are the operation of the dedicated terminals and the implementation of long-term legal contracts (Vitsounis and Pallis, 2012). Dedicated terminals are the basis for long-term relationships, while reducing the tendency of the carrier calling to another port (Heaver et al., 2001). In addition, long-term agreements increase the commitment between the parties and the future revenues of the ports are guaranteed. In addition, the joint use of communication and information systems (e.g. Electronic Data Interchange (EDI)), which is another structural RM activity, has been found to be an important factor for the port user to continue to use the port and to remain committed (Chang and Thai, 2016). Financial benefits and social relations alone are not enough to make a port attractive (Ng, 2006; Button et al., 2015). Consequently, structural RM tactics give the ports an opportunity to create improved service quality and value added services. Value added services of a port may include technical support, transportation, advertisement support, assembly, warehousing, consultancy, catering, water supplies, packaging, cold storage, exclusive terminal agreements, dedicated berthing arrangements and information technology (Okorie et al., 2016).

In addition to those mentioned above, we can show the following activities for the structural RM tactics of the ports (Caliskan and Esmer, 2016, 2017):

- Investing according to customer requirements
- Drawing up special and long-term contracts
- Berthing window applications
- Track and tracing systems
- Communication and information systems
- Adapting port systems, operations, or working methods to fit in with the systems of special customers (Bennet and Gabriel, 2001).

Exclusive advantages offered to special customers through structural RM also create trust and commitment because such customers feel special, knowing that it is hard or will take a long time for other suppliers to obtain the same benefits (Berry, 1983). Hence, we propose the following hypothesis:

Hypothesis 3. *Structural RM tactics have a positive impact on relationship quality*.

3.4. Relationship quality

Relationship marketing can be handled as several phases. In the first stage, it consists of some efforts to build relationships, so it is impossible to gain trust from the very beginning. In the second stage, it includes some efforts to develop and keep the existing relationships, so here trust can be handled as a booster of developed relationships between buyer and seller. According to the Hawes et al. (1989) contracts with multiple pages and clauses are not the determinants of trust between buyer and seller. From the point of business relationships, trust refers to the feeling of buyer about the seller in terms of high probability in keeping promises and low probability in not to keep promises (Swan and Nolan, 1985). Shortly, trust is about willingness to rely on a partner (Moorman et al., 1992) due to such relevant qualities as honesty, fairness, responsibility, etc. (Rotter, 1971).

The other concept in relationship quality which is handled together with trust is commitment. Commitment is seen as a prerequisite for long term relationship between buyer and seller (Dwyer et al., 1987; Morgan and Hunt, 1994; Garbarino and Johnson, 1999; Palmatier et al., 2006). Commitment entails that one exchange partner believes that the relationship is "so important as to warrant maximum efforts at maintaining it" (Morgan & Hunt, 1994). Relationship commitment could enhance the relationship between ports and customers and could improve the logistics processes to meet customer needs and in turn high financial benefits could be gained (Bae, 2012). Bae (2012) found a positive influence of commitment on sales effectiveness of port logistics firms.

In some industries (e.g. apparel industry), relationships shaped by trust and commitment are more important than legal procedures and long contracts (Uzzi, 1997). It is argued that expectations are more predictable in such relationships (Fynes et al., 2008). Additionally, relationships characterized by trust and commitment also paves the way for reducing organizational problems, finding common solutions to problems, reducing control and monitoring costs, and ultimately leading to better financial returns. As in other sectors, trust in the maritime sector also increases the image of the seller. Thus, relational

risks (e.g. opportunistic behavior) decrease and the future behavior of the parties becomes more predictable. In addition, the commitment to the maritime firm increases and the use of its services is maintained (Yuen et al., 2018). According to Yuen and Thai (2017) trust and commitment are also components of maritime supply chain relationship quality. In cases where the quality of the relationship is low, the supply chain members cannot take the advantage of the benefits of cooperation and coordination.

According to the commitment-trust theory (Morgan and Hunt, 1994), the success of relational marketing lies in keeping and retaining customers. When the loyalty of the customers is gained, it returns to the firm as a financial return. Reinartz and Kumar's (2002) findings indicate that long term customers lead to higher profits. Also as noticed by Anderson and Mittal (2000) profitability increases by the retention of existing high quality customers. In addition, the positive impact of the relationship quality on the supply chain performance has been empirically tested with several studies (Lotfi et al., 2013; Panayides and So, 2005; Shin et al., 2018).

The other claim in this research is that, the enhanced relationship quality with RM tactics generates increased port performance. Inspired by the studies of Crosby et al. (1990); De Wulf et al. (2001); Palmatier et al. (2007); Lotfi et al. (2013); Panayides and So (2005) and Shin et al. (2018) in this research it is expected to see a direct and positive relationship between relationship quality and port performance. Therefore, the following hypotheses are proposed in this study.

Hypothesis 4. *Relationship quality has a positive impact on port financial performance.*

Hypothesis 5. *Relationship quality has a positive impact on port customer relationship performance.*

Hypothesis 6. *Customer relationship performance has a positive impact on port financial performance.*

4. Methodology

4.1. Measurement items and survey design

Items and measurement scales were extracted from the literature and from the qualitative study performed formerly (see Caliskan and Esmer, 2016, 2017) and they were adapted to the port industry context. It was tried to mix the items from different constructs in each section to avoid respondents' possible consistent responds to similar items. Items measuring more than one aspect were avoided to include in research scale. Short, simple and precise expressions were preferred. To avoid confusion with mixed endpoints, all the item scale numbers started with one (1) and ended with five (5). The scales are anchored by strongly disagree (1) and strongly agree (5).

Before proceeding to the main data collection phase, the designed survey (Appendix) was pre-tested. Pre-test process of this research included qualitative and quantitative processes. Firstly the review and assessments of two experts in the port industry, and two academics in the marketing area were obtained. Then, preliminary quantitative analysis was performed.

4.2. Qualitative pre-testing

According to the evaluations of the experts of the port industry, the statement about gifting (Soc4) was combined with the statement of Soc3 (Remembers special days and sends greeting cards or flowers). The reason behind that lies in reducing the perception of gifting (apart from special day greetings), as a bribery or fee for a service.

In the opinion of a marketing expert and a port expert, a reverse coded statement was added to the trust. They also indicated that the statement of Com2 (We regard our customers more as important business partners) is the same as Com4 (Our customers view the relationship with us as a long term partnership). Therefore it would be better to remove Com2 given its negative impact on the reliability of the scale as already established by De Wulf et al. (2001) and Palmatier et al. (2009).

Finally, on the recommendation of a marketing expert, Com5 (Our customers are willing to pay more for us than other ports) was excluded from the commitment scale because the same expression is usually used on the loyalty scale.

4.3. Quantitative pre-testing

Because the research scale was generated from different sources, there was a risk of obtaining unsatisfactory results in factor loadings. Therefore, the scale was subjected to a quantitative preliminary test before starting the basic research. In the qualitative pre-test phase, after eliminating the three items and adding an item, the last version of the scale was sent to 56 port sector members and exploratory factor analysis was performed with the data obtained to explore the underlying structure among the factors. Principal component analysis was used as extraction method, and varimax was used as the rotation method. Constructs' reliability was examined through Cronbach's alpha (α) and as a software package IBM SPSS 20.0 was used.

Firstly, the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy was found 0,624 and the significance of Barlett's Test of Sphericity is 0,000. So, we can conclude that the scale is proper for factor analysis. According to the EFA results (the rotated loadings of each item on the component), *Tru2* (port respects the confidentially of customers' information), Com6 (The relationship we built with our customers deserves their maximum effort to maintain), *Soc2* (We treat and serve our regular customers better than non-regular customers), *Soc6* (We track special interests of our regular customers), *Soc9* (We exhibit personal warmth, sincerity), *Str6* (We guarantee the service) and *Str7* (We have high standard of conduct) have been omitted from the scale because of cross or low loadings.

4.4. Sampling

One of the tough issues of conducting scientific studies in the port industry is the limited number of population which leads sometimes unsatisfactory results. In this research all the ports in Turkey selected as population. All the container terminals in Turkey (24 terminals) (Table 1) were selected as sample (judgmental sampling) due to such limitations as monetary, timewise, and practicability. According to Hair and Anderson (2010), for structural equation model (SEM), the sample size should be determined based on a minimum of five times the number of variables in the survey. So, in this research, the sample was estimated to be at least $28 * 5 = 140$ for container terminals.

To reach the desired reliability level in the statistical analysis it is vital to get enough number of survey responses. Because both the

Table 1
Sample for ports in Turkey.

Container Terminals in Turkey	
APM Terminals İzmir	Mardaş
Assan Port	Marport
Asyaport	Mersin (MIP)
Borusan	Nemport
Çelebi Port of Bandırma	Port Akdeniz
TCE Ege	Port of Canakkale
DPWorld Yarımca	Yılport
Evyap port	Alport
Hopaport	Rodaport
Kumport	Samsun Port
Limakport	TCDD Port of Haydarpaşa
Limas Port	TCDD Port of İzmir Alsancak

population and sample of this research is narrow, the potential rigors were tried to be overcome by reaching at least 5 individuals in each terminal.

Also the respondent's position is important while selecting the sample. The respondent representing the port should be aware of the relationship marketing applications of the port. For ports, it was aimed to reach the below positions absolutely;

- Manager
- Marketing manager
- Customer representative
- Sales/marketing staff member

In addition to the above positions, to increase the response rate, it was aimed to reach also operation and commercial departments' managers.

4.5. Data collection process

Survey conducting process was run through a mail questionnaire (impersonal survey method). The first round of surveys were sent out to the respondents between the dates of 03.08.2016–14.09.2016. The second round of data collection was performed between the dates of 04.10.2016–18.11.2016. Longer and several periods for data collection reduce the risk of bias (Ghauri and Gronhaug, 2005) because the fluctuating and impressible nature of maritime industry (e.g. seasonal slowdowns, economic crisis, political issues, etc.) may influence the results. In the first round 83 and in the second round 57 surveys from container terminals were collected. Some testing procedures were carried out to remove low quality data. Trap statements with similar outcomes but reverse coded were examined and conflicting answers were removed. After data cleaning, a total of 134 surveys from container terminals remained in the sample.

4.6. Respondent profiles

Table 2 shows that the majority of the respondents in container terminals are male and according to the age frequencies, 83% of them are older than 29 years old. 70% of the sample is between 30 and 49 years old.

According to the tenure levels, the majority of the respondents (76,8%) have experience between 1 and 10 years in the same position in the same company. Almost 42% of the respondents have port industry related work experience between 11 and 15 years. 24% of the respondents have been working in port industry between 16 and 20 years. These respondents constitute 66% of the total sample. Therefore, it can be said that the respondent profile of the research consists of professionals in port industry.

As it was told in sampling procedure above, all the managers and marketing managers of the container terminals were tried to be reached and the process ended successfully by obtaining returns from all of them. Because of that there are equal number of respondents who have manager and marketing manager titles (Table 3). Customer representatives and sales/marketing staff constitute 54% of the sample.

Table 2
Demographics of the container terminal sample.

Gender	**Frequency**	**Percentage**	**Tenure**	**Frequency**	**Percentage**
Female	23	17.1%	0–5 years	55	41%
Male	111	82.8%	6–10 years	48	35.8%
Total	134	100%	11–15 years	28	20.9%
Age	**Frequency**	**Percentage**	16–20 years	3	2.2%
20–29	9	6.7%	Total	134	100%
30–39	51	38%	**Total Work Experience**	**Frequency**	**Percentage**
40–49	43	32%	0–5 years	11	8.2%
50–59	29	21.6%	6–10 years	23	17.2%
≥60	2	1.5%	11–15 years	56	41.8%
Total	134	100%	16–20 years	32	23.9%
			≥21 years	12	8.9%
			Total	134	100%

Table 3
Titles of the respondents.

Position	Frequency	Percentage
Manager	24	17.91
Marketing manager	24	17.91
Customer representative	32	23.88
Sales/marketing staff member	40	29.85
Operation manager	6	4.48
Commercial department manager	8	5.97
Total	134	100

5. Results

5.1. Preliminary analysis

5.1.1. Multicollinearity test

With the aim of detecting the multicollinearity problems in data set, the variance inflation factor (VIF) was used as an indicator of multicollinearity (Salmerón Gómez et al., 2016). VIF evaluates the increase of variance of an estimated regression coefficient if the variables are correlated. The lower VIF values indicates low correlation among variables (if no variables are correlated, the all values of VIF will be 1) (Hair and Anderson, 2010). All the variables in the models were tested through taking one of them as dependent and others as independent and by repeating this process 28 times. The VIF values of ports are changing between 1.189 and 8.724. Therefore it was concluded that there is not any multicollinearity problems in the data set.

5.1.2. Confirmatory factor analysis

The reliability and validity of the measures was assessed by confirmatory (CFA). All the standardized loadings were above the recommended cut-off point of 0.60 (Bagozzi and Yi, 1988) (between 0.62 and 0.95) with significant t-values (critical t value = 2,576 for $p \leq 0.01$). Additionally, the model fit indices met the recommended thresholds (Bentler, 1988; Browne and Cudeck, 1993; Hu and Bentler, 1999) ($p = 0.01$; $\chi^2 = 485.04$, $df = 371$, $\chi^2/df = 1.41$, RMSEA = 0.048, CFI = 0.98). This result reveals that the data shows an acceptable fit to the six-construct and twenty eight items model.

5.1.3. Convergent and discriminant analysis

Because it is known that unreliable and theoretically unsupported constructs can still have a good fit (Tomarken and Waller, 2003), to assess the quality and validity of measurement model, construct validity was examined also through convergent and discriminant validity analyses. To achieve convergent validity, average variance extracted (AVE) values and composite reliabilities (CR) were calculated. All the latent variables had high composite reliabilities (between 0.81 and 0.96), well above the accepted 0.70 value (Bagozzi and Yi, 1988). Additionally, all the constructs had AVE values between 0.52 and 0.89, which were also above the recommended threshold of 0.50 (Hair and Anderson, 2010). Table 4 shows that discriminant validity is also achieved since the AVE values of the constructs are higher than squared correlations of the constructs. The only one minor problem occurred, with squared correlation RQ ↔ STR exceeding STR's squared AVE by 0.06. However this slightly high value is considered acceptable because discriminant validity is also supported by (i) the fact that the measurement model has a good fit without containing cross-loadings or correlated error terms and by (ii) absolute correlation values, which do not show multicollinearity (Hair and Anderson, 2010). This result indicates that the measurement items explain for a larger proportion of the variance in their loaded

Table 4
Composite reliability (CR), Average variance extracted (AVE) scores and squared correlations.

			Squared correlations					
	CR	AVE	FIN	SOC	STR	RQ	CRP	FP
FIN	0.93	0.79	0.62*					
SOC	0.88	0.61	0.11	0.37*				
STR	0.86	0.52	0.27	0.09	0.27*			
RQ	0.92	0.63	0.12	0.31	0.33	0.39*		
CRP	0.81	0.60	0.14	0.28	0.18	0.37	0.36*	
FP	0.94	0.85	0.08	0.17	0.24	0.24	0.28	0.72*

* Square root AVE values of each construct.

constructs than others.

5.1.4. Common method bias analysis

There might be a common method problem in the data because the questionnaire is used for data collection purposes. Harman's single factor test was applied to test whether a single factor's variance exceeded 50 percent of in the model (Podsakoff et al., 2003). As a result of the exploratory factor analysis, the variance of a single factor was found to be at most 32%. Therefore, we can say that the common method bias is not a problem for this study.

5.2. Multilevel structural equation modeling

Once the significant impacts of relationship oriented efforts on ports' customer relationship performance and financial performance were identified, we further used the multi-level structural equation modeling (MSEM) to test multilevel indirect effects (Preacher et al., 2010), in which we assumed relationship quality as a mediator between relationship marketing strategies of ports and their customer relationship and financial performances. The MSEM is a new and original statistical method that allows researchers to see within and between group impacts and test the significance of indirect effects. The assumed model is shown in Fig. 2. As depicted in Fig, this study employed a 2-2-2 multilevel level mediation model, in which all variables are managerial-level measures. All analyses were estimated using maximum likelihood estimation in Mplus 7.0.

Results of MSEM analyses revealed that the hypothesized model appears to be a good fit to the data. In particular, the RMSEA value is 0.061 and the CFI value is 0.96, and SRMR is 0.047. The chi-square fit index of the model is 311.61 with 258 degrees of freedom. In addition, the model achieved global fit of $p > 0.05$. All of these fit indices suggest adequate absolute and comparative fit between the implied and observed data. The Mplus estimates for pathways both for within and between levels can be found on Table 5. Table 5, assessments of the parameter estimates suggest that all paths from relationship marketing tactics of container terminals to relationship quality are statistically significant in the hypothesized direction at both the within and between levels. The path from relationship quality to financial performance is only significant in the direction at the within level; the relationship at the between level is not statistically significant.

6. Conclusion

Maritime industry is a market where characteristics of business to business marketing is presented significantly. In addition to this, maritime industry involves many intermediaries in daily operations. Stopford (2009) asserted that, the existence of the maritime industry depends on developing and obtaining the efficient relationships. According to the principles of relationship marketing, the efficiency of distribution channel as a system is a vital factor in terms of obtaining competitive advantage over the competitors (Morgan and Hunt, 1994).

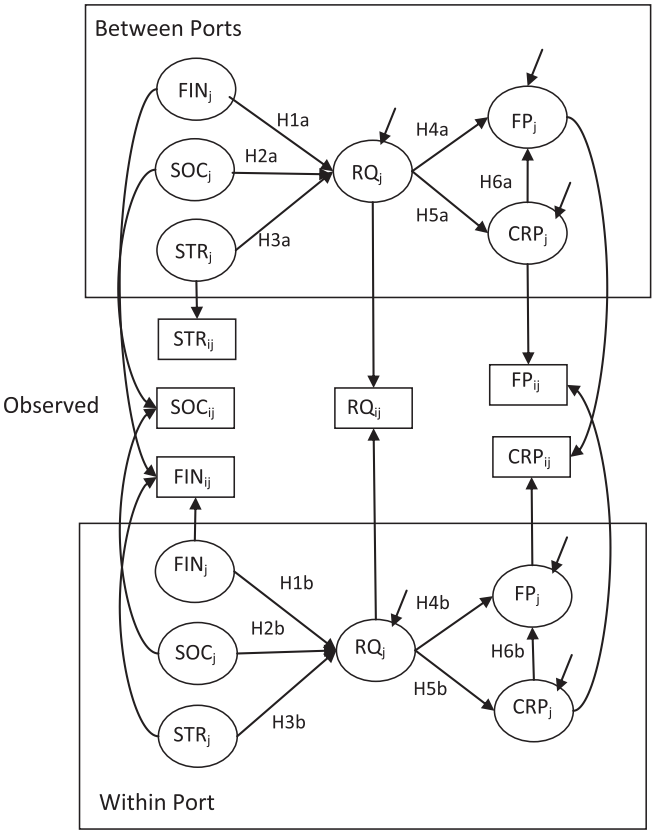

Fig. 2. The multilevel mediation model for 2-2-2 in our study.

Table 5
Results of the analysis.

Hypothesis	Level	Estimate	Support
H1a	Within	0.528**	Yes
H1b	Between	0.580**	Yes
H2a	Within	0.371***	Yes
H2b	Between	0.430***	Yes
H3a	Within	0.761***	Yes
H3b	Between	0.783***	Yes
H4a	Within	0.181*	Yes
H4b	Between	0.193 ns	No
H5a	Within	0.645***	Yes
H5b	Between	0.712***	Yes
H6a	Within	0.734**	Yes
H6b	Between	0.791**	Yes

ns: not significant.
* Significant at the $p < 0.050$ level.
** Significant at the $p < 0.010$ level.
*** Significant at the $p < 0.001$ level.

Without ignoring the importance of being a part of intermodal system, adaptation of infra and supra structure for bigger vessels and for different types cargoes, this research focuses on the other leg of strategies called relationship marketing to offer another way of gaining competitive advantage for port businesses. If relationship marketing investment do not impact positively the business performance both in terms of financial and non-financial, continuation of it doesn't seem so meaningful. That's why this research was conducted by means of a multilevel structural equation model (MSEM) that investigated the relationship between relationship marketing strategy applications and port performance. There are two reasons for using MSEM in this study. The first one is the existence of a mediator (relationship quality) in the research model. The second one is; data were collected from a total of 134 individuals from 24 ports. In other words, at least 4 people from

each port were involved. Therefore, data were analyzed both within and between ports.

The quality of the relationship is a determining factor in the success or failure of a firm (Morgan and Hunt, 1994; Lotfi et al., 2013). As service is the main product in the maritime industry, the customers consider the relationship with the company while evaluating the service quality. Our investigation identified that relationship marketing tactics increase the relationship quality between the seaport and its customers. It is promising to see the impact of financial tactics on the relationship quality. Because the ports concentrate on the areas where they can move quickly due to the intense competition and the ability to apply financial tactics is easier and faster for them than making long-term investments. The relocation decisions of shipping lines are affected by port charges since price elasticity is extremely high, especially in the container port market. For example, Haralambides et al., 2002 found that increasing port charges at Hamburg and Bremen by about 10% reduced calls of carriers at those ports. Also, it is well known that Maersk stopped calling at the Port of Singapore (PSA) in 2000 and started to use the Port of Tanjung Pelepas (PTP) instead for their transshipment cargoes because PTP offered them a 30% lower port price, which resulted in an 11% decline in PSA's business. Moreover, in the following years, PSA also lost Evergreen and APL, which followed the strategy of Maersk (Kleywegt et al., 2002). The positive effect of social tactics on the relationship quality coincides with the findings of Cahoon (2004). In his study the port managers strongly emphasized that the best marketing strategy for a port business involves maintaining face-to-face contact with customers. In addition, the present results confirm the latest trends in maritime studies that show how non-price competition tools are gaining importance for port competitiveness (Schellinck and Brooks, 2016; Esmer et al., 2016). A shipping line's decision stop berthing at a port can cause a twenty percent loss of throughput (Notteboom, 2006). To avoid this kind of threat, structural RM tactics offer a bond between the port and the shipping line. Based on a sample of 24 container terminals' representatives (134), this study found that structural RM investments increase port-customer relationship quality. As supported by RM theory, the involvement of shipping lines in both the port business service design and in-service selling has strategic importance. This involvement may enable ports to discover customer preferences and determine the required service quality dimensions, which will help minimize the unnecessary efforts and investments, specialize and personalize the services, and maximize satisfaction levels. In this regard, value-added services within structural RM applications offered in accordance with the demands of shipping lines can protect ports from capital intensive investments and enable them to react to short and medium-term requirements. Additionally, ports can prevent cargo becoming footloose and make the future more predictable by making exclusive agreements. For example, while TCE Ege and Nemport are located in the same Aegean bay, TCE Ege is growing faster than Nemport, which the port manager suggested was due to exclusive agreements made with current clients (Bitiktaş and Çetin, 2017). Furthermore, vertical integration of shipping lines into container terminals reduces their footloose nature and imposes long-term relationships, thereby guaranteeing future throughput and generating financial stability for the port (Heaver et al., 2001).

The results of assessing the explanatory power of relationship quality and port performance show that relationship quality increases the customer relationship performance of ports at both within and individual level. Secondly, relationship quality impacts on port financial performance only within level. At the firm level, the role of relationship quality is not verified. Shippers who do not have difficulty in choosing from among the ports operating in the same geography and liners with high bargaining power due to the strategic alliances take away the cargo guarantees of the ports. As a result, the customer loyalty that ports once enjoyed is declining (Tongzon and Heng, 2005). Also, their financial situation is deteriorating. In this study, our core conclusion is that the more a port implements relational marketing tactics, the higher the quality of the relationship with the customer, which then returns to it as the performance of the customer relationship and consequently the financial performance. As a result, the port industry may make the following conclusions: Customer oriented work rather than profit-oriented work will ultimately return as a financial return. Relationship quality is a prerequisite for customer loyalty and customer loyalty is an important asset for a port to ensure adequate flows.

Increasing the attractiveness of ports is important not only in terms of providing financial benefits to ports but also in countries. Because it helps to determine what the import and export behaviors will be.

To date, there is paucity of academic research on how RM is implemented by port businesses, even by other actors in maritime industry. This provided the impetus for our research which addresses this gap. Therefore the contribution of this paper is unique both in terms of quantitatively analysis of RM outcomes and bringing up together the existing and potential RM applications of ports.

Appendix

Construct	Code	Indicator	Source
Financial RM Tactics	Fin1	We offer discounts to our regular customers.	Berry (1995)
	Fin2	We offer deferred payment opportunities to our regular customers.	Caliskan and Esmer (2016)
	Fin3	We excuse our regular customers from extra charges.	Caliskan and Esmer (2016)
	Fin4	We provide incentives according to the cargo type, handling regime and transportation vehicle.	Caliskan and Esmer (2016)
Social RM Tactics	Soc1	We contact with customers regularly through multiple means (Phone call, visit, direct mails, etc.)	Berry (1995)
	Soc2[a]	We treat and serve our regular customers better than non-regular customers.	De Wulf et al. (2001), Gwinner et al. (1998)
	Soc3-**2**[b]	We remember special days (funerals, marriage, success, etc.) and send greeting cards or flowers.	Palmatier et al. (2009), Berry (1995)
	Soc4-**2**[b]	We give gifts to our regular customers.	Palmatier et al. (2009), Berry (1995)
	Soc5-**3**	We perform social responsibility projects and invite customers to be a part of this.	Caliskan and Esmer (2016)
	Soc6[*]	We track special interests of our regular customers.	Caliskan and Esmer (2016)
	Soc7-**4**	We interact socially with our special customers (dinners, lunches, events, etc.)	Yau et al. (2000), Palmatier et al. (2009)
	Soc8-**5**	We give prompt response to customers' complaints and handle them actively.	Lu (2003), Murdy and Pike (2012)
	Soc9[*]	We exhibit personal warmth, sincerity. Relate to customers in a friendly and personable manner.	De Wulf et al. (2001), Berry (1995), Gwinner et al. (1998)

Structural RM Tactics	Str1	We invest in tools and equipment for our special customers.	Caliskan and Esmer (2016)
	Str2	We change our service features for our special customers.	Morris et al. (1998)
	Str3	We draw privilege contracts for our special customers.	Morris et al. (1998)
	Str4	We have significantly adopted our own systems, operations or working methods to fit in with the systems, operations or working methods of our special customers.	Nielson (1998), Bennet and Gabriel (2001)
	Str5	We have database covering necessary information about customers.	Murdy and Pike (2012)
	Str6 *	We guarantee the service.	Berry (1995)
	Str7 *	We have high standard of conduct.	Berry (1995)
	Str8-**6**	We provide value added benefits that are difficult or expensive for customers to provide.	Berry (1995)
Relationship Quality (Trust-Commitment)	Com1	Our customers are willing to go the extra mile to work with us.	De Wulf et al. (2001), Palmatier et al. (2009)
	Com2 *	We regard our customers more as important business partners.	Wilson and Vlosky (1998)
	Com3-**2**	Our customers feel committed to our relationship.	De Wulf et al. (2001), Palmatier et al. (2009)
	Com4-**3**	Our customers view the relationship with us as a long term partnership.	De Wulf et al. (2001), Palmatier et al. (2009)
	Com5 *	Our customers are willing to pay more for us than other ports.	Kim et al. (2001)
	Com6 *	The relationship we built with our customers deserves their maximum effort to maintain.	Morgan and Hunt (1994)
	Tru1	This port can be trusted.	Bennet and Gabriel (2001)
	Tru2	We respect the confidentially of customers' information.	Wilson and Vlosky (1998)
	Tru3-**2**	This port can be relied on to provide sound information, advice and assistance.	Bennet and Gabriel (2001)
	Tru4-**3**	When we promise to do something by a certain time, we do so.	Bennet and Gabriel (2001)
	Tru5-**4**	In our relationship with customers, we cannot be trusted at times. (R)	Morgan and Hunt (1994)
Financial Performance	Sales	Compared to major competitors, our sales have been increasing rapidly.	Sin et al. (2002), Zou and Cavusgil (2002)
	Profit	Our business is very profitable relative to our major competitors.	Sin et al. (2002), Zou and Cavusgil (2002)
	Mshare	Our market share is very high relative to our major competitors.	Sin et al. (2002), Zou and Cavusgil (2002)
Customer Relationship Performance	Cr1	The number of successful new customers (Much worse-Much better)	Halpern (2006)
	Cr2	The growth of business with existing customers	Halpern (2006)
	Cr3	The retention of existing customers	Halpern (2006)

[a]These items were extracted from last version of the questionnaire after the pre-testing process.
[b]New codes that are used in the analysis.

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