

Factors Influencing Selection of Container Shipping Lines in Pakistan – A Logistics Perspective

Batool Iqbal¹, Danish Ahmed Siddiqui²

¹Research Scholar, Karachi University Business School, University of Karachi, PAKISTAN

²Associate Professor, Karachi University Business School, University of Karachi, PAKISTAN

*E-mail for correspondence: batooliqbal@live.com



<https://doi.org/10.18034/abr.v7i1.8>

ABSTRACT

The purpose of this study is to understand the most influential factors affecting the selection of container shipping lines in Karachi, Pakistan and to assist shipping lines to formulate their strategies and long-term goals by influential factors. Reliability, transport cost, responsiveness and IT orientation and communication are the key influential factors in the selection of container shipping lines. An online survey was conducted to acquire responses from shipping line customers, i.e., freight forwarders, exporters, manufacturers, etc. Questionnaires were sent to 350 individuals who have a clear responsibility of selecting container shipping line based on their preferences and logistics requirement. Out of these 350 respondents, 150 usable responses were received having a response rate of 44%. Data were analyzed by using SPSS Statistics. Multiple regression tests were run to evaluate influential factors on the selection of container shipping lines. The Reliability test was also executed to indicate significance.

Keywords: container shipping lines, reliability, responsiveness, freight cost, IT orientation and communication

INTRODUCTION

Pakistan is one of the major sourcing origins for many global retailers, making it the world's 54th largest export economy (OEC, 2017) and shipping industry plays a very pivotal role in economy's growth. This study will allow us to understand the selection criteria of shipping lines and how shipping lines can be effective in developing their strategies to retain customers in the long run.

The inspiration of this paper was kindled by literature where authors have emphasized on the fact that selection of freight carrier or container shipping line is one of the most important activities and decisions in supply chain management. From source to the customers, transport services have a very profound effect on cost, reliability, responsiveness and on-time cargo delivery to the customers. (Setamanit and Pipatwattana, 2015)

Past studies have also clearly stated that one of the most competitive focuses have been put on customer satisfaction in container shipping line as the carriers are dynamically competing for the available cargo volume (Shang and Lu, 2012, Yuen et al., 2015). And most of the research has been restricted to the study of the ocean

carriers' selection only from shippers' perspective (Kannan et al., 2011, Lirn and Wong, 2013). This created a gap as to why not a carrier selection research be done from freight forwarder's perspective as well. Literature also supported that container shipping lines have different customers; however, the core customers are freight forwarders (Konsta and Plomaritou, 2012). Freight forwarders have huge volumes and carriers are mostly working with freight forwarders to get more business. (Parola and Musso, 2007, Amaruchkul et al., 2011).

From the past research, it is also evident that academicians and practitioners have profound interest and awareness about selection criteria of container shipping lines. Many studies have been conducted in a different context in different countries to identify selection criteria of shipping lines, but a gap still exists in context to Pakistan for analyzing the selection of container shipping line. For example, Setamanit and Pipatwattana (2015) emphasized that freight carrier selection criteria are very vital to deliver best services to the customer in Thailand. Similarly, Kannan et al. (2011) have examined and classified the significant criteria for shipping carrier selection in Indian perspective, and Shen et al. (2015)



studied the factors governing the selection criterion for carriers in the Chinese market. This research is important concerning rules regulations, environmental policies, and economic trends explicitly in Pakistan, hence it is of high significance that we understand the selection criteria of shipping lines locally in Pakistan as well and how shipping lines can serve their customers competently. Based on the above, this study is essential to fill the research gaps in Pakistan.

This research paper highlights the factors that influence the selection of container shipping lines in Karachi, Pakistan from a logistics perspective. The indicators of influential factors were identified and analyzed through extensive literature review and discussion with experts of freight transportation, i.e., interviewing five qualified industry practitioners. An online survey was also conducted with freight forwarders, manufacturers and shippers in Karachi, Pakistan to support this study. This paper will also help to highlight areas where Pakistan container shipping lines need to put more efforts, taking into account various issues that customers face concerning shipping line services.

SHIPPING SECTOR PERFORMANCE IN PAKISTAN

Over the years, Pakistan has developed as a sourcing hub for textile and sports goods, with a steady growth in exports. The exports increased at the rate of 1.4% annually between 2010 and 2015 from \$24.1B to \$26.2B but decreased at the rate of -7% annually from \$29.1B in 2011 to \$20.5B in 2016 (OEC, 2017). Whereas imports have been increased at the rate of 6.63% annually from \$44.5B in 2011 to \$45.9B in 2016 (OEC, 2017). By recognizing major influencing factors that impact customer satisfaction and their decision making in the selection of container shipping lines, freight carriers will be better able to focus on putting the right resources in the right direction.

S.No.	Line	TEUs
1	MAERSK	83,050
2	MSC	76,972
3	APL	44,770
4	SAFMARINE	39,878
5	CMA	36,741
6	UASC	34,249
7	OOCL	26,609
8	W. H. L.	22,164
9	HAPAG LLOYD	21,640
10	COSCO	21,545
11	NYK	17,908
12	HANJIN	16,224
13	HYUNDAI	14,333
14	K. M. T.	13,110
15	A. N. L.	12,536

The top exports commodities out of Pakistan are House Linen, Rice, Non-Retail Pure Cotton Yarn, Non-Knit Men's Suits and Heavy Pure Woven Cotton and top

export destinations of Pakistan are the United States, China, Afghanistan Germany and the United Kingdom. The top import commodities are refined petroleum, crude petroleum, machinery, and import origins are China, the United Arab Emirates, Saudi Arabia, the United States and Indonesia (OEC, 2017).

Above chart represents top 15 container shipping lines by total TEU (Twenty Foot Equivalent Unit) executed in Pakistan. The data has been retrieved from customs manifest and used only for the research purpose as it remains highly confidential.



LITERATURE REVIEW

The notions of reliability, transport cost, responsiveness and IT orientation and communication as instruments to select a shipping line have been discussed in the literature.

Reliability

Setamanit and Pipatwattana (2015) Yeung et al. (2011) emphasized that reliability, after sale service, quality of service, cost, and perceived capability are most important criteria to select container shipping line.

Yuen, K. F., & Thai, V. V. (2015) identified the dimensions of service quality in shipping companies and examine their effects on customer satisfaction. Results showed that service quality dimensions regarding speed, reliability, responsiveness and value are significant to account for customer satisfaction. Wang et al. (2017) managed to provide a solution paper on container routing with re-packing problem in liner shipping. Chang (2015) tried to explore and analyze the risks in container shipping operations from a logistics perspective.

In literature, it is evidently mentioned that a good transportation is not only a key to success and prosperity of an organization but also impacts its complexity, productivity and competitiveness decisions (Porter, 2000).

Adolf (2016) analyzed the development of shipping line, port, and competition. Container shipping lines strategies significantly impact port development and competition in the market. Jerman et al. (1978) identified six factors from component analysis out of which three factors were of high importance such as charges and privileges, transport carrier image and knowledge.

Chung and Chiang (2011) have tried to establish a relationship between schedule reliability and how in turn it affects hinterland transport and logistics costs to the shippers. The finding of the regression confirmed that schedule reliability is crucial for container shipping lines.

H₁: Reliability has a positive and significant impact on the selection of container shipping line.

Transport Cost

Wong (2007) emphasized that criteria that lead to the selection of carrier are mostly based on the selection of low transport cost or shorter transit time. Fanam, Nguyen, Chaoon (2016) identified and analyzed the competitiveness and impact of factors from freight forwarding perspective. All correlations were statistically significant and positive ($p < .05$). Hence, results indicated that factors that have the most profound impact on the selection criteria were schedule reliability, document accuracy, service quality, freight rate, quick handling, and environment.

Chao and Chen (2014) proposed a research model consist of four constructs and six hypotheses to examine how switching cost helps prevent the customer from switching their shipping line. The impact of perceived service quality on customer loyalty was proved significant for customers with high satisfaction levels. Joo et al. (2017) developed a framework for benchmarking freight rates and identified the causes of different shipping cost for shippers and their transport outsourcing strategies.

Kannan et al. (2011) studied the factors governing the selection criterion for carriers from the Indian market. Authors identified first and foremost "low freight" with the following of "pricing flexibility" is the second ranked one. Giving utmost importance to rate reflects Indian shippers thinking of "improving product competitiveness by offering them at low rates in the global market and ensuring the right mix of delivery of service.

H₂: Transport Cost has a positive and significant impact on the selection of container shipping line.

Responsiveness

Cirjevskis (2017) argues on how dynamic capabilities can help in setting a strategic advantage in successful execution in strategy for Asian-Pacific shipping companies. Kent and Parker (1999) analyzed factors in identifying the carrier selection for international containership and to understand the complex relationship between the selection factors influencing selection thought process. Banomyong, R., & Supatn, N. (2011)

identified attributes of freight forwarder, i.e., responsiveness, reliability, assurance, tangibility, empathy, and cost.

H₃: Responsiveness has a positive and significant impact on the selection of container shipping line.

IT orientation and communication

Tseng and Liao (2015) investigated supply chain integration and information system through IT application, Market Orientation, Supply chain integration and Firm performance. Yang (2016) studied the relationship whether a high level of SCI (Supply Chain Integration) contributes to a high level of SC service capability in container shipping. Tseng et al. (2015) have done a comprehensive study on the supply chain integration along with logistics to explore managerial implications. Several logistics-based activities (e.g., information exchange and supplier-customer coordination) are involved in the supply chain in the context of the container shipping field.

H₄: IT orientation and communication has a positive and significant impact on the selection of container shipping line.

Research Framework



METHODOLOGY

The data gathered is primary data and the analysis has been conducted by using Statistical Package for the Social Sciences (SPSS). The data related to the selection of container shipping line, reliability, transport cost, responsiveness and IT orientation and communication are collected and analyzed from freight forwarding companies and exporters/suppliers in Pakistan.

Measurement scales for the selection of container shipping line, reliability, transport cost, responsiveness and IT orientation and communication construct were previously developed and assessed by Setamanit and Pipatwattana (2015), Shen et al (2015), Chao & Chen (2015), Yuen & Thai (2015), Yang (2016), Lin (2011), Chemingui & Lallouna (2013), and Kannan (2011).

In this research, the 5-point Likert scale was used to specify the level of agreement to all items (1= strongly disagree to 5 strongly agree) Likert, R. (1932). Questionnaires were sent to 350 individuals in freight forwarding and export companies in Pakistan who have a clear responsibility of selecting container shipping line based on their preferences and logistics requirement. Out of these 350 respondents, 155 responses were received having a response rate of 44%, but 5 of them were not useable because of incomplete information and a substantial amount of missing data. Thus, we have performed analysis on remaining 150 responses, which represents an effective response rate of 97% of the respondents who have responded.

The measurement scales were separately tested for their reliability and validity. The research model was tested for individual hypothesis and structural fit through structural equation modeling methodology which is a multivariate statistical analysis technique, and it includes factor analysis as well as multiple regression analysis. The answers from the respondents were after collection, processed into SPSS and different analysis and tests were performed such as reliability test, factor analysis, and regression analysis to find out the reliability of the data, the relationship between the variables and the authenticity of the items of each variable.

REGRESSION EQUATION

The Population Regression Equation for this model is as below;

$$SCS = \alpha_0 + \beta_1 R + \beta_2 C + \beta_3 RE + \beta_4 ITC + e$$

Whereas;

SCS, in this model, is "Selection of Container Shipping Line." This variable in this study is defined as means to select a particular container shipping line to deliver best services to customers. There are several factors that influence the selection of container shipping line, and shipping lines can formulate their strategies based on those influential factors to be competitive in the industry.

α_0 is the intercept

$\beta_1, \beta_2, \beta_3, \beta_n$ are the regression coefficients for all independent variables.

R shows "Reliability", and is defined as schedule reliability, ability to deliver cargo at the destination in safe and sound condition and there is less probability of shut out or roll-over of containers at transshipment port.

C, in this model, is "Transport Cost." This variable in this study is defined as reasonable freight rates and other shipping charges along with credit facility on which a customer compares or makes a trade-off in the selection of container shipping line.

RE shows "Responsiveness" and is defined as how quick and fast a shipping line is to cater the requirement of a customer. Responsiveness also refers to the adaptability, i.e., how adaptable a shipping line is to the changing needs and requirements.

ITC shows "IT orientation and communication" and is defined as online connectivity of a shipping line to their customers. How efficient a shipping line is regarding providing online services to the customers as well as proactive communication in case of delays, changes in trade lanes, and advisories of cargo arrival notices?

DATA ANALYSIS

Based on literature reviews, all the parameters from preceding studies have been constructed; therefore, by using the exploratory factor analysis, we can determine the number of factors. In this section, we analyzed factors that influence the selection of container shipping line in the context of Pakistan.

Table I: Distributions of Questionnaires

	Number
Questionnaires distributed	350
Total response	155
Unusable response	05
Usable response	150
Total response rate	44%

Table II: Profile of the respondents

Respondent's profile	Categories	Frequency	Percent %
Business of company	Manufacturer	28	18%
	Shipper	19	12%
	Freight forwarder	94	61%
	Others	14	9%
Export commodity	Sports Goods	84	28%
	Textile(Garments)	113	37%
	Perishable	9	3%
	Chemicals	14	5%
	Machinery	23	8%
	Minerals	14	5%
Destination sector	Others	47	15%
	Asia Pacific	84	16%
	Europe	113	22%
	Latin America	52	10%
	North America-USA	80	15%
	Middle East	94	18%
	Africa	52	10%
Others	47	9%	
Job title	Top Management	14	9%
	Manager and assistant manager	80	52%
	Executive	52	33%
	Others	9	6%

The survey indicated that 60% of respondents belonged to freight forwarding industry while 18% considered as manufacturers, 12% categorized as shipper whereas 9% as others.

Export commodities have a major portion of textile (garments) in the survey, i.e., 73%. Sports good consists of 54%, Perishable 6%, Chemicals 9%, Machinery 15%, Minerals 9% and others as 30%.

The survey indicated that respondents export their commodities to different destination sector, out of which Europe constitutes of 72%, Asia Pacific 54%, Middle East 60%, North America USA 51%, Latin America and Africa 33% and others as 30%.

It is also evident from the survey that 51% respondents were at the post of manager or assistant manager, 33% were at the executive level, 9% at top management level and others as 6%.

Table III: Reliability Statistics

Variables	Cronbach's alpha	No of items
Scs	0.873	3
R	0.825	3
C	0.898	3
Re	0.870	3
Itc	0.898	3
Overall reliability	0.919	15

Table III provides the value of Cronbach's alpha for all the variable which is 0.919. It appears from the table that the values of Cronbach's alpha of SCS, R, C, RE and ITC range from 0.825 to 0.898 (Nunnally, 1978) Thus it can be concluded that the measures have an acceptable level of reliability.

We have performed factor analysis which assists in reducing a large set of data into a smaller number of components that involves some associated variables (Pallant, 2005).

Table IV: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.843
Bartlett's Test of Sphericity	
Approx. Chi-Square	1961.884
Degree of freedom	105
Sig. value	.000

Table IV shows the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) for this study was high as 0.843 whereas Bartlett's Test of Sphericity was significant.

Table V: Factor Analysis of Correlation Matrix

Table V Factor loadings for Individual Performance in the logistics industry in the context of Karachi.

Notes: Extraction Method: Principle axis factoring, Rotation method, Varimax with Kaiser-Meyer-Olkin

Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity.

	FACTOR ANALYSIS				
	Component				
	1	2	3	4	5
Our existing shipping line delivers cargo at the destination in safe and sound condition.		0.73			
Our existing shipping line is cautious about the confidentiality of our shipment data.		0.761			
Our existing shipping line efficiently transships to meet desired delivery time.		0.644			
Our existing shipping line offers reasonable freight charges.			0.805		
Our existing shipping line offers reasonable local origin charges.			0.96		
We get reasonable credit facility from our existing shipping line.			0.95		
Our existing shipping line has a good response time.	0.8				
Our existing shipping line has multiple service products.	0.699				
Our existing shipping line is adaptable to arrange special delivery requests.	0.827				
We will most likely recommend our existing shipping line services to others for cargo movement.				0.628	
We think it is better for us to use our existing shipping line services for export shipments.				0.618	
We will use our existing shipping line services for our needs.				0.87	
Our existing shipping line has online shipment tracking facility to check container status.					0.665
Our existing shipping line usually releases B/L and freight invoices on time.					0.618
Our existing shipping line has an online container booking facility.					0.899

Table V illustrates all variables that are reliability, transport cost, responsiveness and IT orientation and communication and selection of container shipping line. To obtain the result of grouping, a factor analysis was conducted, and we rotated the factors by using the varimax method to simplify our results interpretation and all items were scrutinized for patterns through factor analysis.

Table V illustrates rotated component matrix. When loading less than 0.40 were excluded, analysis resulted in a five-factor solution with a simple structure (factor loadings > 0.40).

Three items loaded onto Factor 1 which are related to RE (Responsiveness). Three items loaded onto Factor 2, represented R (Reliability) whereas three items loaded onto factor 3, resulted in C (Transport Cost), three items loaded onto factor 4, resulted in SCS (Selection of container shipping line. Lastly three items loaded onto Factor 5 representing ITC (IT orientation and communication).

Table VI: Regression Analysis

Variables	Coefficient	T. Stats	Prob. Value	VIF
Constant	-0.027	-0.097	0.923	
R	0.172	2.033	0.044	2.791
C	0.158	3.23	0.002	1.036
RE	0.385	5.363	0	2.017
ITC	0.278	3.317	0.001	2.568
R Square	0.79			
F-Statistics	60.19			
Probability (F-Stat)	.000 ^b			

Variance Inflation Factor (VIF) in our study for all three independent variables is low 1.03, 2.0, and 2.5, 2.79; this leads to the result that multicollinearity does not exist. R square is called the coefficient of determination, which in this study is 0.79 since cross-sectional data always have less R square (Reisinger, 1997).

A multiple linear regression tests was performed to examine the relationship between selection of container shipping line and reliability, transport cost, responsiveness and IT orientation and communication.

Value of coefficient or slope represents the relationship between the variables. With the demographic variables included Table VI illustrates the results of regression analysis which clearly depicts that coefficients of reliability ($\beta = .172$), transport cost ($\beta = .158$), responsiveness ($\beta = .385$), and IT orientation and communication ($\beta = .278$), are positive and there is a positive relationship between dependent variable (Selection of container shipping line) and Independent variable (reliability, transport cost, responsiveness and IT orientation and communication). As we already know that in multiple linear regressions, the sign of coefficient whether it is negative or positive give us the direction of the effect.

We can observe that Significance F value is less than 0.1 which states that combined effect of all independent variable is significant. Per the results obtained, regression equation is as follows:

$$SCS = -0.027 + 0.172R + 0.158C + 0.385RE + 0.278ITC + e$$

To better understand this study, Table VI results showed that reliability has a positive and significant ($\beta = 0.172$, $p < 0.1$) impact on the selection of container shipping line

thus supporting the hypothesis H1. This shows that if any shipping line is reliable to deliver cargo at the destination in safe and sound condition, cautious about the confidentiality of customer and efficiently meets sailing schedule, is more likely to be selected or preferred by the customer. Reliability is more related to schedule frequency and on time vessel arrivals at the destination. Shipping lines should forecast all major risks of delayed arrivals and should provide authentic and reliable schedules for their customers. Sometimes cargo gets delayed due to congestion at transshipment port (A port where vessels connect, i.e., HUB), in these scenarios, shipping lines should be ready with the contingency planning and route the vessel in an efficient way to meet the desired delivery at destination.

Transport Cost has a positive and significant ($\beta = 0.158$, $p < 0.1$) impact on the selection of container shipping line thus supporting the hypothesis H2. Freight cost is the most important factor which includes freight charges, THC (Terminal handling charges), Bill of lading cost (Document charges), and customs filing charges. Shipping lines should focus on devising the best possible rates for customers. Shipping lines with best possible rates are more likely to be selected by customers.

Responsiveness has a positive and significant ($\beta = 0.385$, $p < 0.1$) impact on the selection of container shipping line thus supporting the hypothesis H3. Responsiveness is related to adaptability to the changes in the environment; a shipping line should always be available for their customers, should provide multiple options of products to the customers and should arrange special delivery as per customer's needs.

Lastly, IT orientation and communication have a positive and significant ($\beta = 0.278$, $p < 0.1$) impact on the selection of container shipping line thus supporting the hypothesis H4. Shipping lines with effective and efficient IT system are most preferable. Online vessel schedules, containers status, documents dashboards, freight invoices and booking facility are top most priority these days.

CONCLUSION AND RECOMMENDATION

This paper explores the influential factors that impact the selection of a container shipping line from a logistics perspective in Pakistan. We theorize a structural model including reliability, transport cost, responsiveness and IT orientation and communication as a prototype to the selection of container shipping line. With increasing sourcing from Pakistan, it is highly imperative that container shipping lines devise strategies to be more competitive with the customers.

The results of this study depicted that reliability, transport cost, responsiveness and IT orientation and communication are the key influential factors and it is proved from the analysis that they have a positive and significant impact on the selection of container shipping

lines. Based on the conclusions of this paper, it is suggested that container liner shipping companies should pay attention to improving the factors recognized in this study to augment their competitiveness in the shipping industry.

Container shipping lines should pay more attention to needs of the local market and should have a customer-centric approach to be competitive in the industry and retain customers. As the GDP of Pakistan has increased by 6.2% in FY2016/17, it is highly imperative that we see economic growth. With increasing competition, it has also been observed that carriers are being chosen based on different parameters and factors. All above-mentioned constituents develop the basis of this study to be carried out.

This research serves contribution to the container liners, Government, academic research, and third-party logistics provider. This research paper serves as first-time study about the selection of container shipping lines in Pakistan, Karachi. In past researches, the focus has always been on different countries and regions. A structure model has been defined based on several influential factors affecting the selection of container shipping line, whereas data was collected from freight forwarders, exporters, and manufacturers of Karachi, Pakistan.

Hence, container shipping companies should endeavor to ensure adherence to transit time and ensure reliable service as unreliability would cause frustration with freight payers, and negatively impact the image of the container shipping company. Similarly, competitive freight charges are of high importance to retain the customers. It is also important how effectively a shipping company responds to the changes in the system and cater to the needs of customers.

This research paper indicates that freight cost is one of the main factors in the selection of container shipping line. Different shipping lines have different rate structure whereas there is no check and balance for the same. The government can play a vital role in regulating and standardizing rate structure of shipping lines. Almost all global shipping lines have a local presence in Pakistan and most of them operate as per the global processes based on their parent organization. The government could play an important role in regulating the standard procedures for these shipping lines.

Advance container manifest also put an extra logistics cost to customers when they have delays in production and shippers face difficulties in meeting the 24 hours advance manifest timeline. The government can consider changing the customs regulations about advance manifest declaration timeline from 24 to 12 hours as it will be beneficial for shippers minimizing their total logistics cost. The research recommends that the government should reduce the duty at Karachi port which comes under government authority. Multiple shippers' cargo cannot be

gated in at Karachi port as per law. This put high logistics cost to shippers. Government should allow a consolidated container to be gated in at port area as current government bonded facilities are not feasible for customers. This strategy would help shipping lines to retain more business concerning vessels calling at Karachi port.

This research shall help the container shipping lines improve their strategies by directing their investment to the key influential factors found in the research - freight cost, responsiveness, reliability, and IT orientation and communication. Freight cost includes high THC (Terminal handling charges) and sometimes replacement charges also incur if containers are not available in particular empty yards, impacting the customers' bottom line. The research shall help the shipping lines adapt a more customer-centric approach rather than just focusing on their top line. This study shall be very helpful to container shipping lines in understanding the customers' approach in their selection process.

This research could serve as a stepping stone when shipping lines select the port of calls within Karachi in future. As we know that Karachi port has high cost as compared to Port Qasim hence shipping lines calling at Port Qasim has high priority as compared to shipping lines calling at Karachi port. Shipping lines should also seek support from the Government to change rules around Karachi Port and customs.

This study could aid the third-party logistics providers to understand customer approach in container shipping line selection and, based on the key influential factors identified, work closely with shipping lines in fulfilling the need of customers.

LIMITATIONS AND ROAD TO FUTURE RESEARCH

Due to time and cost constraints, this study has considered responses from container shipping line customers in Karachi, i.e., Freight forwarders, suppliers, manufacturers and export companies. However, future study should aim to consider random sampling from all over Pakistan so that results could be more generalized.

In some cases, selection of container shipping lines does not come under the scope of the freight forwarder or shippers sitting in Pakistan; rather selection decisions are taken at the destination at customer end. This study has taken into consideration the responses to local decision making and preferences. However, future study should aim to take responses from destination customers so that results could be more generalized.

To develop a full understanding in the selection process of container shipping line, the future study should focus on the interaction between shippers/manufacturers, carriers and government authorities since each of them hold a vital share in the selection of container shipping line.

Furthermore, future research should compare the influential factors observed by container shipping line customers between nations within the same region. Future research should also consider the characteristics of container shipping line customers, i.e., freight forwarders/shippers/manufacturers should be considered according to their size and nature because the larger customers tend to observe different factors keeping in view the nature of the contracts length signed between them and the shipping lines. The future research may also include the organization structure and supply chain strategies of shipping line customers since some customers prefer to be agile and cannot compromise on schedule reliability whereas some are more cost conscious and tend to select container shipping lines with the most competitive rates only.

The structure and process of transport of goods are not only crucial for shipping lines but also very essential for the entire supply chain. Proper transportation of goods from one country to another country without any disruption is of high consideration. Delays and poor service can result in losing customer satisfaction as it can disrupt entire supply chain. This study shall provide a proper analysis of influential factors; thus, container shipping lines can wisely allocate their resources and prioritize their activities to improve loopholes and better serve the customers so that they become the most preferred shipping lines.

REFERENCES

- AMARUCHKUL, K., COOPER, W. L. & GUPTA, D., 2011, A note on air-cargo capacity contracts. *Production and Operations Management*, 20(1), 152-162
- Banomyong, R., & Supatn, N. (2011). Selecting logistics providers in Thailand: a shippers' perspective. *European Journal of Marketing*, 45(3), 419-437.
- Chang, C. H., Xu, J., & Song, D. P. (2015). Risk analysis for container shipping: from a logistics perspective. *The International Journal of Logistics Management*, 26(1), 147-171.
- Chao, S. L., & Chen, B. C. (2015). Effects of switching costs on customer loyalty in the liner shipping industry. *Maritime Economics & Logistics*, 17(3), 341-358.
- Chung, C. C., & Chiang, C. H. (2011). The critical factors: An evaluation of schedule reliability in liner shipping. *International Journal of Operations Research*, 8(4), 3-9.
- Čirjevskis, A., & Čirjevskis, A. (2017). Unbundling dynamic capabilities in successful Asian-Pacific shipping companies. *Journal of Asia Business Studies*, 11(2), 113-134.
- Fanam, P. D., Nguyen, H. O., & Cahoon, S. (2016). An empirical analysis of the influential factors affecting ocean carriers' competitiveness: freight forwarders' perspective. In *Annual conference of the International Association of Maritime Economists (IAME) 2016* (pp. 1-21).
- Harrison, A., & Fichtinger, J. (2013). Managing variability in ocean shipping. *The International Journal of Logistics Management*, 24(1), 7-21.
- Jerman, R. E., Anderson, R. D., & Constantin, J. A. (1978). Shipper versus carrier perceptions of carrier selection variables. *International Journal of Physical Distribution & Materials Management*, 9(1), 29-38.
- Joo, S. J., Joo, S. J., Min, H., Min, H., Smith, C., & Smith, C. (2017). Benchmarking freight rates and procuring cost-attractive transportation services. *The International Journal of Logistics Management*, 28(1), 194-205.
- Kannan, V., Bose, S. K., & Kannan, N. G. (2011). An evaluation of ocean container carrier selection criteria: an Indian shipper's perspective. *Management Research Review*, 34(7), 754-772
- Kent, J. L., & Stephen Parker, R. (1999). International containership carrier selection criteria: shippers/carriers differences. *International Journal of Physical Distribution & Logistics Management*, 29(6), 398-408.
- KONSTA, K. & PLOMARITOU, E., 2012, Key performance indicators (KPIs) and shipping companies performance evaluation: the case of greek tanker shipping companies. *International Journal of Business and Management*, 7(10), p142-161.
- LIRN, T.-C. & WONG, R.-D., 2013, Determinants of grain shippers' and importers' freight transport choice behaviour. *Production Planning & Control*, 24(7), 575-588.
- Ng, A. K. (2012). Container liner shipping, port development and competition. In *Maritime logistics: Contemporary issues* (pp. 5-28). Emerald Group Publishing Limited.
- OECD, 2017 "The Observatory of Economic Complexity- Pakistan-Commodity" n.d., para 1. Retrieved from <http://atlas.media.mit.edu/en/profile/country/pak/>
- OECD, 2017 "The Observatory of Economic Complexity- Pakistan" n.d., para 1. Retrieved from <http://atlas.media.mit.edu/en/profile/country/pak/>
- OECD, 2017 "The Observatory of Economic Complexity- Pakistan-Exports" n.d., para 1. Retrieved from <http://atlas.media.mit.edu/en/profile/country/pak/>
- OECD, 2017 "The Observatory of Economic Complexity- Pakistan-Destination" n.d., para 1. Retrieved from <http://atlas.media.mit.edu/en/profile/country/pak/>
- PAROLA, F. & MUSSO, E., 2007, Market structures and competitive strategies: the carrier-stevedore arm-wrestling in northern European ports. *Maritime Policy & Management*, 34(3), 259-278.
- Porter, M. E. (2000). Locations, clusters and company strategy. In G. Clark, M. P. Feldman & M. S. Gertler (Eds.), *The Oxford handbook of economic geography* (pp. 253-274). Oxford: Oxford University Press.
- Setamanit, S. O., & Pipatwattana, A. (2015). Ocean Freight Carrier Selection Criteria: An Empirical Investigation of Japanese Automotive Company in Thailand. *ASBBS Proceedings*, 22(1), 372.
- SHANG, K.-C. & LU, C.-S., 2012, Customer relationship management and firm performance: an empirical study of freight forwarder services. *Journal of Marine Science and Technology*, 20(1), 64-72.
- Shen, L., Mathiyazhagan, K., Kannan, D., & Ying, W. (2015). Study on analysing the criteria's for selection of shipping carriers in Chinese shipping market using analytical

- hierarchy process. *International Journal of Shipping and Transport Logistics*, 7(6), 742-757.
- Tseng, P. H., & Liao, C. H. (2015). Supply chain integration, information technology, market orientation and firm performance in container shipping firms. *The International Journal of Logistics Management*, 26(1), 82-106.
- Tseng, P. H., & Liao, C. H. (2015). Supply chain integration, information technology, market orientation and firm performance in container shipping firms. *The International Journal of Logistics Management*, 26(1), 82-106.
- Wang, S., Qu, X., Wang, T., & Yi, W. (2017). Optimal Container Routing in Liner Shipping Networks Considering Repacking 20 ft Containers into 40 ft Containers. *Journal of Advanced Transportation*, 2017.
- Widianti, T., Sumaedi, S., Bakti, I. G. M. Y., Rakhmawati, T., Astrini, N. J., & Yarmen, M. (2015). Factors influencing the behavioral intention of public transport passengers. *International Journal of Quality & Reliability Management*, 32(7), 666-692.
- Wong, P. C. C. (2007). *An evaluation of the factors that determine carrier selection* (Doctoral dissertation, University of Huddersfield).
- Yang, C. S. (2016). The antecedents and consequences of supply chain service capabilities in the context of container shipping. *The International Journal of Logistics Management*, 27(2), 236-262
- Yeung, K., Zhou, H., Yeung, A., and Cheng, T.C.E. (2011). The impact of third-party logistics providers' capabilities on exports' performance, *International journal production economics*, 135(2), 741-753.
- YUEN, K. F., THAI, V. V. & DAHLGAARD-PARK, S. M., 2015, Service quality and customer satisfaction in liner shipping. *International Journal of Quality and Service Sciences*, 7(2), 1-20.

--0--

APPENDIX**Questionnaire****“FACTORS INFLUENCING SELECTION OF CONTAINER SHIPPING LINES IN PAKISTAN - LOGISTICS PERSPECTIVE.”**

Business of Your Company	Manufacturer/Shipper/Freight forwarder/Others
Export Commodity	SportsGoods/Textile(Garments)/Perishable/Chemicals/Machinery/Minerals/Others
Destination Sector	Asia Pacific/Europe/Latin America/North America-USA/Middle East /Africa/Others
Job Title	Top Management/Manager and assistant manager/Executive/Others
Years of Experience	< 5 years/6-10 years/11-15 years/15 and above

Please rate below parameters from 1 to 5 based on your experience with only one existing preferred shipping line that has major portion of your export volume.

5-point scale is used to indicate the extent to which you agree or disagree to each statement:

1 strongly disagree; 2 disagree; 3 neutral; 4 agree; 5 strongly agree

Reliability

1	Our existing shipping line delivers cargo at destination in safe and sound condition.	SD	D	N	A	SA
2	Our existing shipping line is cautious about confidentiality of our shipment data.	SD	D	N	A	SA
3	Our existing shipping line efficiently transships to meet desired delivery time.	SD	D	N	A	SA

Transport Cost

1	Our existing shipping line offers reasonable freight charges.	SD	D	N	A	SA
2	Our existing shipping line offers reasonable local origin charges.	SD	D	N	A	SA
3	We get reasonable credit facility from our existing shipping line.	SD	D	N	A	SA

Responsiveness

1	Our existing shipping line has good response time.	SD	D	N	A	SA
2	Our existing shipping line has multiple service products.	SD	D	N	A	SA
3	Our existing shipping line is adaptable to arrange special delivery requests.	SD	D	N	A	SA

IT Orientation and Communication

1	Our existing shipping line has online shipment tracking facility to check container status.	SD	D	N	A	SA
2	Our existing shipping line usually releases B/L and freight invoices on time.	SD	D	N	A	SA
3	Our existing shipping line has online container booking facility.	SD	D	N	A	SA

Selection of container shipping line

1	We will most likely recommend our existing shipping line services to others for cargo movement.	SD	D	N	A	SA
2	We think it is better for us to use our existing shipping line services for export shipments.	SD	D	N	A	SA
3	We will use our existing shipping line services for our needs.	SD	D	N	A	SA

Online Archive: <https://abc.us.org/ojs/index.php/abr/issue/archive>

