

0017

Insufficient Container and Space Availability



Kamolak Klindee¹, Phattrakorn Nakkieng²

B.B.A. in International Trade and Business Logistics,
International College, King Mongkut's University of
Technology North Bangkok, Bangkok, Thailand
E-mail: pb.bunnyz@gmail.com¹, phattrakorn.15@gmail.com²

and

Achareeya Robkit

International College, King Mongkut's University of
Technology North Bangkok, Bangkok, Thailand
E-mail: achareeya.r@ic.kmutnb.ac.th

Insufficient Container and Space Availability

by

Kamonlak Klindee¹, Phattrakorn Nakkieng²

B.B.A. in International Trade and Business Logistics,
International College, King Mongkut's University of
Technology North Bangkok, Bangkok, Thailand
E-mail: pb.bunnyz@gmail.com¹, phattrakorn.15@gmail.com²

and

Achareeya Robkit

International College, King Mongkut's University of
Technology North Bangkok, Bangkok, Thailand
E-mail: achareeya.r@ic.kmutnb.ac.th

Abstract

With the globalization of production and internationalization of trade, exporting and importing have become the hot issues in shipping services. The increase in the international transporting of goods has resulted in insufficient containers and space. The shipping lines provide them inadequately to the customers' requirements for exporting and importing. The aim of this paper is to solve the problem of maritime booking processes that result in insufficient containers and space for the shippers who want to export their products internationally. The paper will focus on the causes and also offer solutions to the problem.

Keywords: Shipping Services, International Transporting, Maritime Booking Process

1. Introduction

Sea transportation is widely known in logistics world and it is the most important and popular mode which has been used broadly compared to other modes because of low cost and serving of cargo's large quantities. Nowadays, sea transportation moves about 80% of international trade (Delta Logistic Group, 2016). Sea transportation. (2018, January 16). By estimation, the maritime trade accounts for 55% of world trade in value terms (Hoffmann et al., 2016).

Sea transportation can serve the customers' requirements with various cargo types, both regular and non-standard cargoes which vary in size from 20 to 40 feet and also the service types, both full container load and less than container load. This efficient operation offers the exporter and importer opportunity to often use this mode of transportation.

The key factors that influence customers' choice of shipping company for their cargo are container and space available onboard the vessel when needed, service frequency (Matear and Gray, 1993; Mangan et al., 2002), and transit time reliability, e.g., punctuality (Matear and Gray, 1993; Murphy and Hall, 1995; Cullinane and Toy, 2000; Mangan et al., 2002; Shinghal and Fowkes, 2002).

1.1 Statement of Problems

The audience will see the importance of exporting and importing by waterways from the advantages mentioned above. Nevertheless, there are problems in the vessel booking step, mainly that there is no available space and containers left for booking. According to those problems, the agents who book the space from the shipping line need to handle this situation and this issue leads to big problems for the exporter, the agent who runs the operations for the exporter including the booking step, and the freight forwarder and the shipping line. The freight forwarder will be the person who is affected in this difficult situation and they also need to find a way to solve the problem.

1.2 Significance of the Problems

- 1) The exporter will satisfy on freight forwarder's service if freight forwarder can run their business smoothly and be able to handle the difficult situation like this problem "lack of space".
- 2) Increasing the reliability to the exporter, getting trust from them and also increasing the relationship between business partners.
- 3) Expanding the business to the market because of the effective and efficient operation attracting companies who want to do business.

2. Literature Review

The research has also been investigated from many sources and we collected the concepts, the factors that cause the problem. We studied the articles and the related research. We are going to show the audience as following. The main four categories include air, rail, land and sea mode, and the most used mode is sea transportation which takes 65-85% in international trade. Shipping is categorized in three types, there are industrial shipping, tramp shipping and liner shipping. Industrial shipping is managed by the companies deciding how to transport their cargoes to all of their customers. Tramp shipping acts like a taxi service to ship the customer's cargo to the destination port. Lastly, liner shipping is a ship that has a standard schedule sailing to the ports according to the company set up. Sea transportation is rather more complex than the other modes in the size, characteristics or even the cost as well (Christiansen et al. (2004, 2007).

In Lim (1996), the researcher has divided service routes in three types which are end-to-end, pendulum and round-the-world service routes. Each route has a different number of landmass where the vessels are sailing. End-to-end routes sail between two landmasses, pendulum routes sail between three landmasses. On a pendulum route for the last land mass on the route is used as turning point, and the last is round the-world routes, sailing around the whole world.

The logistics and transportation industry plays very big role in an increasingly globally-connected world. The logistics and transportation industry in the United States is a \$1.3 trillion business and accounts for 8.5% of the annual gross domestic product (GDP) in 2011. (Li Li, Rachel Q. Zhang, 2015).

A shipping line company normally has two kinds of business that need to deal with shippers and forwarders. Both shippers and forwarders have business with the line companies, but their purposes are different. Shippers require the shipping line services for delivering of cargo instead of contracting and booking the container directly with the shipping line and the shippers can hire a forwarder as their agent to take care of cargo delivery. Forwarders act as agent for shippers to contract container berths with the shipping lines for their own profit. In order to earn profit, the forwarders often ask the shipping lines to provide extra services to their customers such as the extra container space to be temporarily reserved for their customer and satisfying them as well. (Kee-Kuo Chen, Ching-Ter Chang, Cheng-Sheng Lai, 2007).

Booking services which includes availability of space, advice on delays, handling of sailing inquiries is the second worst service by the shipping line evaluating from the interfacing departments of the customer's most preferred shipping line service from all seven scales level. (Durvasulaa, Lysonskia, and Mehtab, 2001). The problem caused due to customer factors. These factors influence shipping company ability to utilize the vessel capacities which includes the overbooking, vacations, seasonal, material shortages, production cycles and production break downs. All of these factors were sources of uncertainty and also created falling in number or amount in the capacity demand. It can result in periods of lower vessel capacity utilization and periods of occasional capacity shortages when there is an unexpected order of large transport volumes. The customer will make "double booking" to reserve the space and container in order to be more flexible and to be certain of obtaining at least one of the bookings. This practice is still happening because the double booking and late cancellations have not added any extra costs for the customer so there is not any incentive for them to change their behavior. This is another reason causing the lack of space and container. However, the customer should improve both of their forecast of expected transport volumes or demands and the information to the shipping company to be conducive to reduce this problem (Styhre, 2010).

Route characteristics such as demand variations, trade imbalances and competitive situations also affect the desirable level of unutilized capacity. A service with large market share because of few competitors and a service with small percentage market share would be different. A service with large market share has power to argue to keep the utilization in a little bit lower in contrast with a service with small percentage market share which has to book and book again, if the space and container is become full. (Styhre, 2010). The customers need to find another shipping company to solve their own benefit and those customers are not as loyal as they are to services with a large market share. In the regular sales, the shipping line company can take place long before the shipping date in the contract market then afterwards in the week which is close to the shipping date. If there is surplus capacity, the shipping line company also sells capacity in the spot market at a spot price with lower price than the contract market. (Zhuzhu Song, Wansheng Tang, Ruiqing Zhao, 2017) This reason also leads to cause insufficient containers and space for the shipper who wants to ship the goods at first time purchasing agreement.

Marine transport planning can be horizontally defined in strategic, tactical and operational. For the strategic, they can set the market and trade choices, ship design, network design, transportation mode and the position of port or terminal (Christiansen et al., 2007), tactical issues is resizing and grouping vehicles, and route scheduling, such as the right approach and speed to connect with costs. There is a special interest in port selection, including port fees, equipment, bunkers, port technology, port turnaround time, etc. (Branch, 1998). The operational issues include loading and unloading, and also weather routing (Christiansen et al., 2007). The shipping companies are sailing from port to port at the scheduled time. Now the container ships also sail at a low speed to reduce the fuel cost and be careful with things that are harmful or poisonous. At the same time,

container ships are getting bigger. The container ships can become a moving warehouse so why containers are very famous in the world. Container ships can provide two things. These are transportation and storage services. Containers that are loading on the vessel around the port can impact and show where there is a shortage of containers. The model that already used, it has been developed to show and help people understand the situation. The results help the decision maker on the number of containers that are carried onboard and lift off the ship. It also gives the new concepts for container needs (Song and Dong, 2011). And most of the time, they do not have enough information to identify the supply or the demand of containers used because shipping companies generate revenue from shipping containers loaded, they look only at the containers that have the cargo. That way it loses the opportunity to ship goods and has the cost of carrying the empty container back from the port. Therefore, repositioning container is always seen as a cost. Besides that, containers are not only for sea transportation but they are also used in part of container logistics. One of the most widely used reasons is because it is easy to transport for an intermodal and easy to pack (Choong and Cole, 2002). In order to trade with the container issue, need to think of the times and capabilities in each transport model that can be provided. This article aims to plan the horizon of time.

Logistics have many definitions because this word is widely used in many fields. In transportation, logistics is process of transport goods or services to the customers by the right place and at the right time. For the container ship, container is the one of the transportation in logistics. However, the containership need to move containers follow customers need at the right destination, containers cannot move on their own. So, containers in logistics and shipping line in logistics are very important to provide achieving maximum productivity services because there are integrated with other parts of the supply chain processes. It is also important to be able to control the problem of container shortage by using logistics concepts (Fremont, 2009). Every company meets these problems. In order to make a container an empty container is required which if not available needs to be repositioned to the export location to make the container process flow. It can solve the container omit. Container repositioning is a complex and difficult issue for the container lines to reduce costs and maximize profits. As mentioned, repositioning container is always seen as a cost so that impact the management in container. Reposition empty containers internationality increases the inventory and operational cost to the shipping company, and it also increases the capital investment in the container. Ng describes how shipping companies reduce the impact of empty, load and unload container by improving their liner network and fleet size planning on their strategic on delivery of containers and manage the global container at the operational process. Shipping lines also use partnerships to solve the problems, collaboration with other supply chain partnerships, using innovative technologies and expanding new market monitoring for containers (Ng, 2012 : p. 45).

After reviewing this literature, we have a comprehensive perspective on how to manage container, since our goal is to manage time, market and transportation capabilities. We will find information to determine supply and demand. Based on information from this literature and the information we have found, we will consider what is the best strategy to address the lack of containers.

3. Research Methodology

3.1 Research Design

Designing a study will help the researchers do a plan more easily and implement it to obtain the intended results, moreover increasing the opportunities of gaining the information in the real circumstance. In a study, the researchers will convey an interview to the respondents for six questions.

3.2 Research method

The researchers use the qualitative approach to be the key method to analyze the data and become with the results. The advantage of qualitative research is more open to the adjusting and refining of research ideas as an inquiry proceeds.

3.3 Research Instrument

The researchers design the questions to interview the respondents for data gathering process to get qualitative data. The primary aim of the questions is to collect the experts' knowledge, experiences and relaying this effective information to the audience to study.

The researcher will interview the respondents asking the following questions:

- 1) As your own experiences, have you met with the insufficiency of space and container for booking and how do you handle with this kind of problem?
- 2) What is the cause of this problem?
- 3) Does the problem affect you or your customer?
- 4) Any special tips to suggest for avoiding the problem?

3.4 The scope of study

The respondents in this study were the staff in the export team of SCG Management Company and also the staff from Yang Ming Shipping Line.

3.5 Procedures of Data Gathering

Walking into the company to interview the respondents to gather the information and the researchers will make a note according to their explanation.

4. Results Analysis

4.1 Interview Methodology

Eight respondents were interviewed which started with 2 staff from SCG Logistics Management Company and another one staff from Grand Siam Composite Company on 27 March, 2018, taking about 30 minutes. Three staff from S5 Asia Limited was interviewed in the evening on 28 March for 30 minutes and both left staff from Damco Logistics (Thailand) Company Limited and Land Logis Limited was interviewed on 30 March taking time each per 10-15 minutes.

4.2 Interview findings

Table 1 Question 1

Respondent	Question1
1. Grand Siam Composite Company	Mr .Supakorn Porncharoenroj export operator/resin
2. SCG Logistics Management Company	Mrs. Pichit Singpring export operator/refractory products
3. SCG Logistics Management Company	Mrs. Parichat export operator/sanitary ware
4. S5 Asia Limited	Mrs. Disanee thanurak export customer services/China
5. S5 Asia Limited	Mr. Anushit worak export customers/India
6. S5 Asia Limited	Mrs. Arofah nurak export customers/Japan
7. Damco Logistics (Thailand) Company Limited	Mr. Jiraphan Chantrarom/working at customer service of export/taking care of P&G customer. P&G is mostly exporting a Hair care and Skin care product under brand Pantene, Rejoice, Head & Shoulder, Olay Etc.
8. Land Logis Limited	Mrs. Pinyapat Plianlaor/customer service, coordinating with shipping line (booking), handling with documents to customs department/powder, food additives (BATTER MIX, MIX FLOUR,SEASONING), food stuff.

The respondents were interviewed with the first basic first question and the next question is asking have the respondent faced this kind of situation?

Table 2 Question 2

Respondent	Question2
1. Grand Siam Composite Company	YES
2. SCG Logistics Management Company	YES (HYUNDAI Shipping line shipped to Karachi Port in Pakistan)
3. SCG Logistics Management Company	YES
4. S5 Asia Limited	YES
5. S5 Asia Limited	YES
6. S5 Asia Limited	YES
7. Damco Logistics (Thailand) Company Limited	YES
8. Land Logis Limited	YES

Their answers agreed that the insufficient container and space problems always occurred in the reality and also provide the cause of the problem in the next question.

Table 3 Question 3

Respondent	Question3
1. Grand Siam Composite Company	-Shipping line informed the full loading capacity of vessel due to there are many customers booking.
2. SCG Logistics Management Company	-The quantity of required container is more than the quantity of container which was allocated.
3. SCG Logistics Management Company	-Negotiating with customer about new shipment or to split boarding
4. S5 Asia Limited	-Shipping line have a limit capacity container -The factor is about the season of their country ex. China for new year season
5. S5 Asia Limited	-The containers are not enough with the customers need and the customer need the container in the quick time
6. S5 Asia Limited	-Shortage of container
7. Damco Logistics (Thailand) Company Limited	-There are many factors that can be cause of a container shortage and tight space. For example, the weather can impact to the container's condition in case that customer expected to have container with grade A quality. The reason of full space depends on the period of booking.
8. Land Logis Limited	-Shortage of container

The respondents showed that there are many conditions leading to insufficient container and space problems, which is the consent that every respondent made agreement is and the next question, the respondents also offered the solutions.

Table 4 Question 4

Respondent	Question4
1. Grand Siam Composite Company	-Negotiating with the shipping line via their Sales team or Freight team -Pre-booking
2. SCG Logistics Management Company	-Using the other shipping lines -Discussing with the customer to have partial shipment -Postpone a shipment -Pre-booking by asking the collaboration from the customer
3. SCG Logistics Management Company	-Using other shipping lines services -Negotiating with customer about new shipment or to split boarding
4. S5 Asia Limited	-Using the other shipping line - Deal with customer to book the next route or change a little bit ship
5. S5 Asia Limited	-Negotiating with customer about new shipment or to split boarding
6. S5 Asia Limited	-Negotiating with customer to change shipping line or make a long contact to pre-book
7. Damco Logistics (Thailand) Company Limited	-In case of a container shortage, we would ask shipping line to check and seek for the alternative container yard in case that the one on booking confirmation is facing the container shortage. For the full space, we need to refer to the allocation capacity. -We supposed to have which customer has aligned with shipping line as a contract once negotiate with sale.
8. Land Logis Limited	-Changing to other shipping lines -Postpone the loading date

Each of respondents proffered the solution of the problem with many different comments, but the consented comment is changing to use other shipping lines instead. The next question, the researcher would like to ask the frequency time and the period occurring the problem the respondents faced.

Table 5 Question 5

Respondent	Question 5
1. Grand Siam Composite Company	-Vacations, long holidays -Port Congestion period thus the containers were not able to be taken in the port causing the shortage of container.
2. SCG Logistics Management Company	-Long holidays, before holidays, festival such as New year day, Songkran day
3. SCG Logistics Management Company	-New Year holiday
4. S5 Asia Limited	- New Year season, vacation
5. S5 Asia Limited	- Holidays, seasons of products
6. S5 Asia Limited	-The ship problems, the weather ,the high season in each products
7. Damco Logistics (Thailand) Company Limited	-We sometimes faced it in the end of month when many people booked space with carrier and the container shortage is always happening when there is a rain.
8. Land Logis Limited	-Beginning of a year January and April

The respondents showed the same idea about the period of causing the problem often on holidays or festival for instance New Year day on January or even Songkran day on April.

Table 6 Question 6

Respondent	Question 6
1. Grand Siam Composite Company	- Need to find many other alternative shipping lines
2. SCG Logistics Management Company	- Inform the forecast to freight team to let them negotiate with a shipping line
3. SCG Logistics Management Company	- To estimate and make an anterior booking
4. S5 Asia Limited	- Make the long term contact with freight forwarder or customers
5. S5 Asia Limited	- Booking beforehand about 1 month if the container require more than 10 container
6. S5 Asia Limited	-Planning and forecast every week and find the second shipping line for emergency
7. Damco Logistics (Thailand) Company Limited	-The full space issue can be avoided by an early space booking or by asking to carrier's customer service representative or sale about the space situation to be able to plan for the right timing of space booking.
8. Land Logis Limited	-Ask the customer to inform us to booking beforehand about 1 month or before loading date about 3 weeks

The respondents showed many different ideas offering the suggestions. Most suggestions are offered by preparing themselves to have an early booking avoiding the problem of lack in container and space.

5. Conclusion and Recommendation

5.1 Discuss the results

The first question: Introduction / What is your company? / What is your position? / What is your career? / What product do you export? The respondents introduced themselves and talked about the career. Everyone has duties to deal with the booking service procedure to their customer which was mentioned in this study who are both freight forwarder who provide the service to their customer by being the representative to do these booking service procedure and the shipping line agent or known as the carrier who works in customer service section who directly contacts to the freight forwarder or the customer to sell the container and space to contain and load the client's cargoes to the destination port.

The second question: Have you faced with any insufficient container and space problems when do booking or when dealing with customer (in case of you act as the carrier). The respondents strongly agreed to say that the insufficiency in container and space has usually occurred in reality. Everyone has faced with this problem.

5.2 The third question: What is the cause?

The respondents gave lots of opinions to clarify the doubt such as the immediate booking which causes lack of container and space. When it arrives to booking procedure, it should be prepared and pre-booked for 2-3 weeks before delivery day. Moreover, if it is a long holiday like New year day, Songkran Day, it should be pre-booking before for 2-3 months avoiding the insufficiency in container and space. There are other causes like the limitation capacity of each shipping line to allow their customer to have right to book due to the shipping line allocating the capacity for all of their customers equally or inequitably, it depends on their agreement.

5.3 The fourth question: -Solution?

The respondents suggested many solutions. The most common suggestion is to change using other shipping lines' service and other suggestions are to negotiate with the freight team and sales team from shipping line, negotiate with customer to postpone the ETD date (estimated time to departure) or the date when the vessel departs from the loading port however these are the protection after the consequence. The involved parties should prevent the cause which leads to the problem. The pre-protection should be taken in consideration. Pre-booking by asking the collaboration from the customer to inform the freight forwarder agent early about the exact ETD date to let the freight forwarder agent to plan the exact time including load date and picking up date, return date.

5.4 The fifth question: When do you often face with the problem?

The respondents agreed that the busiest time leading to the problem will occur when start to long holidays. The containers and space are full pre-booking by many customers so the freight forwarder and the shipper have to pre-book before.

5.5 The sixth question: Can you suggest the way to avoid the problem?

The ways to avoid the problem are many suggestions such as early booking by planning before, having reserved shipping line or many alternative shipping lines to use in emergent period, providing the forecast of container quantity to the freight team of freight forwarder company to negotiate the container and space availability with the shipping line.

5.2.6 The relationships management

Another thing that is important is relationship with customer, the relation is the strategic management by many companies to keep long term contract with their customer satisfying their customers, needs. Companies need to ethically practice to their customer and the business between two parties will be fulfilled with trust from both sides.

Successful relationships management is built on mutual trust. The companies should invest in relationships and offer the value to their customer. Analyzing how to build trust and strong relationship with customer, all the techniques have to be used to catch the customer.

In this case, the customer keep relationship with both freight forwarder and shipping line, they use freight forwarder and shipping line's service. Since the parties have made agreements on long term shipping contract, all parties mutually benefit. The customer has exact reserved container and space provided by shipping lines and shipping lines also have their exact number of their customer in the lists to share the service capacity to their customer according to their agreements. Long term contract is very important for many businesses now. The companies want to build strong partnerships and also increase the security.

Maintaining the good relationship with customer is necessary to exist the business to grow up at the present and more in the future. They are interdependent between all the parties who are involved.

There are many advantages of building good relationship

- Connector become very significant in global business. People will get to know you by word of mouth from many people who have known you directly or from your connectors.
- Open Communication with your customer by meeting face to face increase the relationship by honest communication

Customer Relationship certainly helps this problem because if all parties have agreements of contracting, they need to trust with another party that would perform the best performance for them. Moreover, if there is a long contract making, there are the compromise about the agreements of doing something such as the special rights for their trusted customer.

5.3 The future research

The research involves insufficient container and space availability was rare and the available booking in container showed the effectiveness of information. Based on the above limitation, many aspects of problems in shipping transport can be investigated for future research. Firstly, the research can be further improved by expanding the time frame to give the researcher more time to do research on more respondents in order to gain more factors which could predict the demand of the space and container. Secondly, several performance factors should be included in the questionnaire in order to evaluate the effectiveness of sea training program such as the country that face these problems, the number of export container in each month, and importance of resistance/openness to change. Thirdly

the shipping company should record the information the booking or the demand of the container needs in each month for useful for expanding the market of the company and for the benefit of shipping industry in Thailand.

References

Chen, Kee-Kuo & Chang, Ching-Ter & Lai, Cheng-Sheng, 2009. "Service quality gaps of business customers in the shipping industry," *Transportation Research Part E: Logistics and Transportation Review*, Elsevier, vol. 45(1), pages 222-237.

Li, L., Zhang, R.Q. (2015). "Cooperation through capacity sharing between competing forwarders". *Transportation Research Part E: Logistics and Transportation Review*, Elsevier, vol. 75, pages 115-131.

Murphy, P.R., Daley, M., Dalenberg, D.R., 1992. "Profiling international freight forwarders: A Benchmark". *International Journal of Physical Distribution & Logistics Management*. Vol. 22 (1), 35–41. Cited in Li, L., Zhang, R.Q. (2015). Cooperation through capacity sharing between competing forwarders. PR china : Elsevier Ltd.

Styhre, L. (2010). Capacity utilisation in short sea shipping. Ph.D. Thesis, Department of Technology Management and Economics, Calmers University of Göteborg.

Van de Weerd, V. (2009). Investigate the ship routing and cargo allocation in container liner shipping between Europe and Asia. Bachelor Thesis. Erasmus School of Economics. Erasmus University Rotterdam.