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Less than a container load booking process

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<p>Less than a container load (LCL) booking process is a topic of specific interest for importing and exporting small and medium businesses. The growing interest in this sector is due to its cheap price and possibility to have lower volumes transported as well. The author's personal interest in the topic is driven by the job experience acquired during the internship and work years as a Logistics assistant at Wcargo OY and further at Nordicon OY.</p> <p>The focus of this paper lies on the booking part of the whole marine transportation process. While booking a full container load (FCL) is a relatively simple task, LCL is a more troublesome process. This research paper is an attempt at understanding the roots of this misconception as well as offer recommendations for NVOCC (non vessel operating common carriers) and freight forwarders on how to improve the booking process.</p> <p>The thesis approaches the topic from two sides. From one side it tries to get insight into the booking process by presenting the NVOCCs point of view, and from another side, it researches what are the businesses' expectations from booking a LCL by conducting interviews.</p> <p>Another experiment conducted for the purpose of this topic was the price inquiry, during which a price inquiry message was sent to six companies dealing in LCL shipping. The results of the inquiry as well as the quotes received are analyzed and conclusions are drawn.</p> <p>As it has been found out by the present research, the booking process is complicated because of the number of intermediaries participating in the process. The lack of transparency as well as the lack of online tools for receiving immediate quotes prolongs the entire booking process. Other negative aspects from the shippers' point of view are the elaborate quotes which need separate explanation from specialists in the area</p> <p>The thesis might be of good value for sales departments of NVOCC companies, who are interested in improving customers experience throughout the booking process and retaining the clients as loyal customers.</p>	
Keywords	LCL booking, ocean shipping, marine cargo

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Key terms and abbreviations

3PL- "Third-party logistics are external companies which perform logistics functions that have traditionally been performed within an organization. The functions performed by the third party can encompass the entire logistics process or selected activities within that process (Lieb cited in Gadde and Hulthen: 1).

BOL- (Bill of Lading) It serves as a receipt of shipment when the goods are delivered to the predetermined destination (Investopedia 2006).

Bonded/ Customs warehouse- any place approved by, and under the supervision, of the Customs authorities where goods may be stored under prescribed conditions.

Carrier- Company that transports goods and/or people by air, land, or sea, in its own or chartered vessels or equipment, and is named as the carrier in the contract of carriage (BusinessDictionary.com).

CFS- Container freight station. Facility where freight shipments are consolidated or de-consolidated and staged between transport legs. A CFS is typically located in proximity to an ocean, port, or airport, where cargo containers are transported to and from (Ups.com).

Consignment- refers to a batch of goods delivered.

Delivery door-to-door- Delivery from the supplier's doors to the buyer's.

Demurrage fee- "Demurrage is the charge levied by the shipping line on the consignee if the container is not cleared and returned to the nominated empty depot within the specified free days offered by the line" (Manaadiar, 2011).

FCL- Full container load

IMO- International Maritime Organisation

LCL- Less than a container load

Metric tone- equals to 1000 kg.

Negotiable BOL- "Instructs the carrier to deliver the goods to anyone in possession of the original endorsed negotiable bill, which itself represents title to and control of the goods, a negotiable bill of lading must be used for a documentary sale" (Lehmanlaw.com).

Non- negotiable BOL- "Under this BOL the shipping company will deliver the goods to its consignee on presentation of an identification". This BOL is usually issued when all the freight charges have been paid and do not require further payment (BusinessDictionary.com).

NVOCC- stands for Non-Vessel Operating Common Carrier

POD- port of destination

POL- port of loading

Shipper- Shippers represent the owner of goods being transported by any mode of transport, whether consignors (the traditional meaning of shipper) or consignee (ESC - European Shippers' Council).

TEU- Twenty-foot Equivalent Unit, as referred to the 20- foot container , became the industry standard reference so now cargo volume and vessel capacity are commonly measured in TEU. For example the 40-foot length container will be mentioned as 2 TEU (Worldshipping.org).

W/M- Weight or cubic meters (M³), the chargeable weight in sea cargo; calculated by multiplying the volume of a shipment to 333 kg/m³, if the result is bigger than the weight of the cargo, than it is taken as basis for further calculation, if not, the weight is taken as basis. Then the basis is divided to 1000 and multiplied to the sum indicated in the price.

1 Introduction

Transportation logistics is a vast industry, with marine forwarding comprising the most complex part of it. The complexity of marine transportation mainly lies in a vast number of suppliers, middlemen and logistics agents, all of them offering the same services at different rates. This requires a shipper to have at least some idea about the marine shipping process in order to deal with it.

Globalization and specialization of different countries in different industries triggers the need of transportation to move products from one point to another. Sea shipping represented 60% out of total EU transport of goods in 2012, reported by Eurostat and it is continuously growing (Epp.eurostat.ec.europa.eu, 2014). The research about transportation economics prognoses that more than 80% of trans-regional cargo will be carried by maritime transportation in the near future (Ng and Liu, 2010).

Booking a full container load (FCL) from freight forwarders is a relatively easy task. However, not all importing businesses have the necessary volume to fill even the smallest 20 ft container with 33 cubic meters of cargo. In order to fulfill the demand for less than a container load (LCL) NVOCC companies are offering LCL transportation along with FCL. Furthermore, as it is researched later in this thesis, consolidating a full container load based on LCL orders involves more middlemen in the process. This is a fact which not only slows down the process but also complicates quoting the final price for LCL.

Specifically the demand for less than a container load (LCL) compared to the demand for a full container load (FCL) is driven by the price difference between these two. The more expensive the opportunity cost of booking a full container load gets, the more prompt are shippers to book a LCL. This issue becomes relevant whenever the prices for FCLs rises. An indicator of container freight price evolution is the CFFI (China freight forwarders index). It reflects the market freight quotation and can help to understand the global shipping trend (En.shippingchina.com). Figure 1 shows how the FCL average price fluctuates. It is suspected that whenever FCL becomes too expensive, the demand for LCL increases.

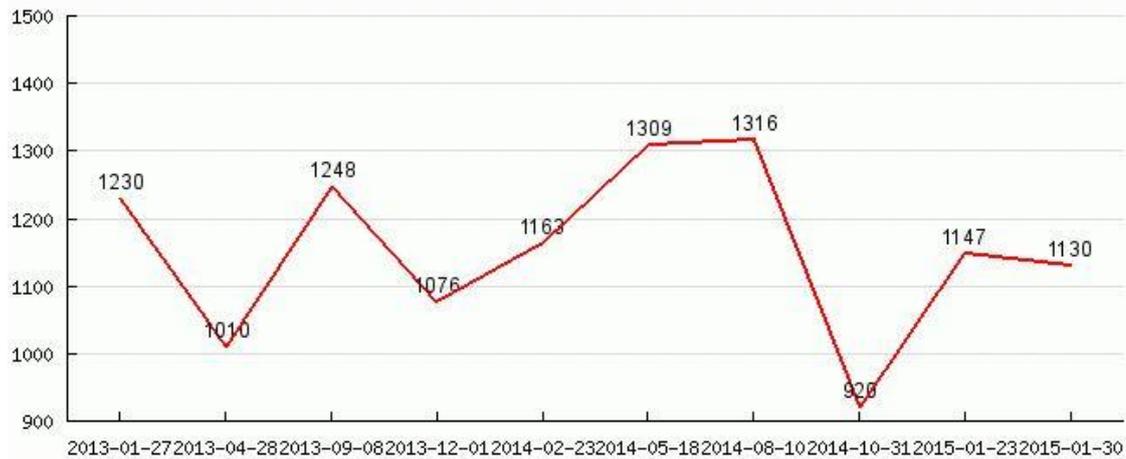


Figure 1. CFFI evolution from Feb. 2013- Feb. 2015 (En.shippingchina.com).

Price is a very important decision making factor in freight forwarding. Sea shipping is the cheapest mean of cargo forwarding, therefore shippers do not want to overpay when it comes to sea cargo. This is where the importance of this research steps in. LCL shipping is probably the most complicated way of transporting the goods, since it incorporates many intermediaries responding for a specific task in the whole supply chain. It is not easy to organize the shipping but even more difficult is the booking process.

Very often in my job experience I received complaints from customers who were frustrated with the fact that the invoices received after the goods have been shipped did not correspond to their estimated price. Loopholes in communication along the supply chain are very possible. Many logistics agents handle the cargo before it is shipped to destination, each of them have their own fees, terms and conditions which makes it difficult to estimate the final price and send the quote fast.

1.1 Objectives and research questions

The main objective of this thesis is to understand the difference between shippers' expectations when booking a LCL and the offering they receive. Figuring out the specifics and problems in the LCL booking process is the first research target. The second research target is to come up with solutions for improving this overly complicated and slow quoting process. It may not be possible to offer a solution that would be an immediate fix for the industry. However, identifying the cause of problems can be a good

step in deciding on what further developments are needed in the industry as well as figuring out a potential continuation for similar research in the future.

The hypothesis that shippers try to avoid LCL shipping was formulated during the writer's work as a forwarder throughout year 2014. It has been noticed that companies order a full container load for cargo which, by volume, would fill at best only half the container. It intrigued the writer to find out the reasons for this inefficient process.

Which is why, in order to achieve the daring objective of this paper, the author has set the task to thoroughly examine all the factors which might affect the shippers decision during an LCL booking process.

In order to formulate a clear and comprehensive understanding of the topic, the following questions will be answered in this research paper:

What is the sea shipping process and what does it involve?

The answer to this question will acquaint the reader with the container shipping process, its supply chain and main parties involved. It will also give an understanding of the complexity of the process both for LCL and FCL shipping. Having a thorough understanding of the process is important in order to find the touch points and key differences between LCL and FCL shipping.

What is the difference between booking a LCL and a FCL shipment?

FCL is regarded as an opportunity cost to LCL booking. Price, time, reliability and other factors specific to the industry are decisive when it comes to choosing the transportation mode. These will be explored in more detail in order to describe the decision-making-process behind each LCL booking.

How do freight forwarding companies view the LCL booking process?

This specific research question aims at understanding what types of offerings there are in the market in terms of LCL booking services.

How do shippers regard the LCL booking process?

This research aims to find an answer to this question by exploring what are shippers' expectations when sending a price inquiry versus the freight forwarders' offering. In the end, recommendations to improve the overall process will be included.

1.2 Methodology

This thesis is a qualitative research. The subject is approached with the assumption that there are complex human factors affecting the decision process of LCL booking. A quantitative approach might fail to look at the big picture and therefore qualitative research is considered more suitable for this thesis topic. In order to provide a holistic view on the topic both theoretical information from secondary sources and empirical data from primary sources will be gathered and analyzed. It is also worth mentioning that the thesis includes some deductions and opinions of the writer based on her working experience in the area during the past two years. While they might not always be indicative and representative of the problem explored, they do give a basis for researching all the factors involved in this complex field.

Primary information sources for this research include interviews with professionals from the ocean freight industry along with several shippers. The interview questions, as well as the names of the interviewees are presented in Appendix 3 and 4. Five professionals from the forwarding industry were interviewed. Among the interviewees were three specialists from forwarding industry and two shippers involved as customers of the forwarding industry. The interviews were conducted through December to March 2015 and the writer used structured interviews to interrogate the specialists, also presented in Appendix 3 and 4. The interviewees were asked a series of 5 to 6 open questions and were encouraged to provide comprehensive information as well as their own personal views. The interview structure aimed at providing them the opportunity to express themselves freely yet comments and additional questions from the author kept the discussion structured and on target. The interview duration was approximately one hour.

Interviewees shared a lot of valuable information from their own experience and from years of experience they accumulated while working in current positions. An interesting case study has been shared by one of the shippers interviewed, which plays an important role for the findings of this research. The case study called "The Chinese phenomenon" is presented in chapter 4.

As part of the methodology, inquiries for LCL quotes are used to gather more detailed information about the LCL price quoting process. These inquiries were sent through January to March, to six logistics companies which offered sea shipping services, including LCL, based on the information on their web sites. The results of these inquiries as well as conclusions drawn out of them are described and analyzed in chapter 4.

This research paper is organized in 6 chapters. The introduction chapter acquaints the reader with the aim of the study, its relevance for the industry as well as objectives pursued along the study. In Chapter 2 relevant literature on container shipping as well as industry peculiarities relevant for the problem statement are explored. Chapter 3 draws a line between FCL and LCL shipping, differences and complications of the booking system are discussed and compared. Last three chapters present and analyze the data gathered from interviews and price inquiries, important conclusive remarks and recommendations are drawn in chapter 6.

1.3 Limitations

The major limitation of this study is that findings are mainly based on the sea transportation route- "China- Europe". China is nowadays one of the biggest exporter globally and EU's second trading partner after the United States. (Ec.europa.eu 2014) It is also the biggest overseas partner for Finnish imports as reported by "tradingeconomics" journal and number one exporter of containerized cargo (Trading Economics 1975-2014, 2014), (Worldshipping.org, 2014). The research project focuses on this specific route considering it the most representative for the study and industry.

Primary data was collected from specialists and companies operating in Finland and China. This is the main reason why the information might not represent the global picture of the problem but just a part of it.

Another limitation of the study is the sample size of selected interviewees. Due to the size of the Finnish forwarding market only five participants were selected. Even though the interviewees are good representatives of the subject area and reflect authentic information, there is still always room for a deeper research of the matter.

"A work of this kind is really never finished; one only calls it finished because one has done all that is possible in the time and the circumstances" (Johann Wolfgang von Goethe), (Goethe, Auden and Mayer, 1962)

2 Container shipping industry

2.1 Main organizations and legal aspects

The definition of shipping as provided by online business dictionaries sounds fairly simple: the process of getting one item from one place to another, or from one person to another (BusinessDictionary.com). In reality the process of container shipping is much more complex.

There are different types of maritime transportation just as there are different kinds of goods to be transported (bulk, commodities, liquid materials transported in tanks etc.). In this research is limited only to containerized shipping process, since this is the focus of the thesis. The main players in container shipping industry are container lines who own the vessels e.g. Maersk, MSC, COSCO and others. Currently, main shipping routes originate from Asia. China along with Japan, South Korea, Indonesia are among the top 10 exporting countries of containerized cargo. The most congested ports are located in that area as well. To provide some background, the port of Shanghai handled about 33,62 million TEUs in 2013 and the port of Singapore handled about 32,6 million TEUs (Worldshipping.org 2014).

Sea transportation is guided worldwide by the following organizations:

- *International Maritime Organization (IMO)*. Its activity ranges from aspects of maritime activity management, security and safety of vessels to marine pollution and maritime cargo security (Rowbotham 2014: 134).
- *The Committee Maritime International (CMI)* is related exclusively to maritime law and related commercial practices. It works on maritime conventions and electronic document/ data interchange (EDI). In 1990 CMI adopted uniform rules for sea waybills (Rowbotham 2014: 139).
- *United Nations Commission on International Trade Law (UNCITRAL)* works on harmonisation and unification of the law of international trade. UNCITRAL established in 1992 a convention governing the rights and obligations of shippers, carriers and consignees under a contract of carriage of goods by sea (Joyner, 2005: 266).
- *The Baltic Exchange* is the only international shipping exchange in the world. It provides independent daily shipping market information, maintains professional shipbroking standards and resolves maritime disputes. (Rowbotham 2014: 136-142)

The above organizations guide the maritime shipping process distributing the rights and obligations between agents. However no laws or governing organizations are regulating such aspects of freight forwarding as pricing, container space distribution and selling. These are left under the supervision of national law and partnership contracts between freight forwarders.

2.2 Delivery Terms

There are many factors affecting transportation and shipping. An especially important factor which plays a major role in freight forwarding industry is the set of international commercial terms of delivery called INCOTERMS issued by ICC (International Chamber of Commerce) since 1936. The latest version has been updated in 2010. Incoterms rules are recognized by UNCITRAL as the global standard for the interpretation of the most common terms in foreign trade. They distribute the risk and responsibilities between parties taking part in the shipping process (Iccwbo.org). The terms of delivery are indicated in the commercial contract between the overseas buyer and seller and on

invoices in most cases (Lawteacher.net 2014). The main incoterms used for ocean freight alone are:

FAS (free alongside ship)- The buyer takes complete responsibility for the cargo when it is loaded aboard the vessel.

FOB (free on board)- The responsibility is transferred from seller to buyer when the container is properly loaded. The seller has to arrange the export clearance.

C&F/CFR (cost and freight)- The responsibility and risk for the consignment passes from seller to buyer when the consignment is loaded onto the vessel. However the sea freight is arranged and paid by the seller.

CIF (cost, insurance, freight)- The seller arranges the sea freight of the consignment and transfers the responsibility at the moment of loading and securing the cargo on the ship. Under CIF terms the seller pays the freight and insurance up to POD. The freight must be pre-paid in order to receive the BOLs (Rowbotham 2014:142).

It is also worth mentioning the EXW (ex-works) incoterm, since it is very often used in commercial contracts. The incoterm is used in all kinds of transportation modes and it means that the seller fulfills his obligation to deliver the goods when goods are available for pick up at seller's premises. It requires that the rest of freight forwarding process is organized by the buyer (Moens and Gillies 2000: 155).

Many major literature sources recognize the importance of incoterms when defining the freight and commercial value of goods, in trade with China specifically. The book "Mastering the Business of Global Trade" presents a number of situations when an overseas buyer would like to be quoted by the Chinese supplier on CIF terms. The CIF incoterm means that the supplier is in charge of organizing the sea shipping, which will be paid by the buyer. In the case described in the book, the supplier is a major exporter and has contracts with some ocean carriers who serve the route. This is a win-win situation, both, for the seller and for the buyer. Buyer pays a discounted price for freight forwarding and the seller has the necessary volume of cargo to ask for a discount (Cook 2014: 147-148).

In case that supplier arranges and supports the costs of shipping, the buyer has to keep in mind that the invoiced final price of commodities will include freight forwarding

costs as well. An important issue to be considered here is the import clearance value of commodities. "Failure to understand incoterms can be extremely costly, as a friend discovered recently when he imported merchandise from a manufacturer in China" (Nielsen, 2014). When the supplier takes care of the shipping process the final price of the goods will be indicated in the invoice under CIF terms. When organizing the import clearance, the buyer will have to pay a larger import duty, since the import tax is calculated as a percentage from total goods value indicated in the invoice.

Incoterms are an important aspect in this research. When a shipper asks for a sea freight quote from a freight forwarder, he has to indicate the incoterm (ex. "Quote request FOB Ningbo-Helsinki). The incoterm gives to the freight forwarder an understanding of who will pay the invoice and for which part of forwarding services. EXW dealings are not often used in overseas shipments. Distant buyers prefer FOB or CIF most of the time (Elliott and Papa 2012: 200). Also the most common incoterms encountered when shipping from China are FOB and CIF (Nielsen, 2014). The EXW quotes, inquired at the country of destination are risky, since the consignee might end up facing additional charges after the goods are shipped. This issue is further explored in chapter 4.

2.3 Intermediaries in sea shipping

"A market is a collection of firms, each of which supplies products that have some degree of substitutability to the same potential buyers" (Koch, 1974). Ocean shipping of one consignment whether it is LCL or a FCL involves many logistics companies and other intermediaries in the process. Each of these companies takes care of a specific part of the delivery process. In figure 2 intermediaries are represented and explained in the sequence of their appearance in the delivery chain from door to door.

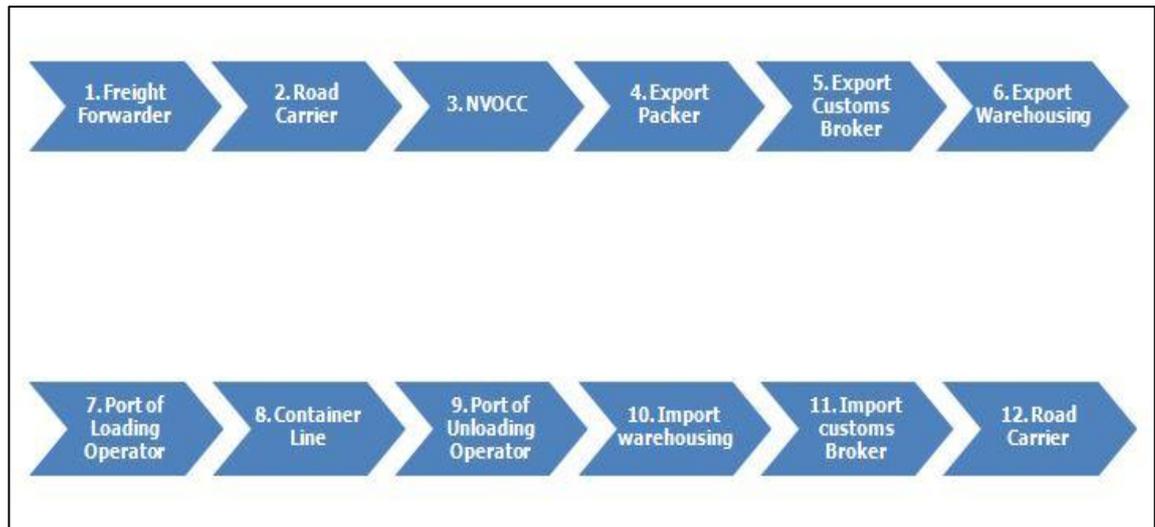


Figure 2: Sea shipping door to door (Sudalaimuthu and Raj 2009: 135-137).

Figure 2 depicts the most important intermediaries. The sea shipping process can include many other middlemen and logistics agents depending on the nature of the cargo and the method of the delivery. One unnamed agent who plays a major role in the entire supply chain, is the shipper. The shipper is usually indicated as the consignor on the BOL. This can be either the supplier who sold the goods or the representing logistics agent at the origin. The various participants in the freight forwarding process, represented in figure 2 will be explored next:

1. Freight Forwarders act as the shipper's agents and select the mode and carrier for their clients' shipments. They provide and process documentation as well as perform freight, terminal and handling payments on behalf of their clients. A forwarder can engage a number of intermediaries on both ends of the cargo movement to enable door-to-door service. Also, a freight forwarder can integrate any of the services he manages to be offered in-house. For example they can offer container consolidation in house, if they have enough clients for LCL instead of contracting a NVOCC company to do this (Sudalaimuthu and Raj 2009: 135).

2. and 12. Road Carrier (Trucking company) is an individual or a legal entity that specializes in hauling trailerloads or less of freight at a time (Hinkelman 2009: 170). Trucking companies handle road deliveries:

-In the country of export- between the consignor's premises and the port or the warehouse where cargo is to be consolidated.

-In the country of import- between the port or warehouse where cargo is unloaded to consignee's premises.

3. NVOCC- Non- vessel operating common carrier buys space from ocean carriers (container lines) for consolidated shipments from a variety of clients. NVOCCs specialize in less than-container load (LCL) shipments. They are common carriers that use containers rather than vehicles or vessels (Sudalaimuthu and Raj 2009: 135). Examples of such companies are: Nordicon OY, Shipco OY, SAKO GmbH, Yusen Logistics Ltd, Legende Logistics Ltd, Seabay International Freight Forwarding Ltd and others.

4. Export packers- Export packing firms supply packaging materials and services for overseas shipments. Export packers specialize in packing for maximum shipment cost efficiency and typically are familiar with any agricultural restrictions and quarantines that pertain to packaging material (Sudalaimuthu and Raj 2009: 136). They can also offer pallets for purchase in case the supplier provides the cargo unpalletized. Sometimes a shipper might consider buying and packing his cargo on pallets since unpalletized cargo is more difficult to load and unload.

5. and 11. Export/Import customs brokers- Customs brokers escort goods through the customs process and have experience with local customs regulations and trade practices. Brokers ensure compliance with laws and verify that customs documentation has been completed (Sudalaimuthu and Raj 2009: 136). Customs documentation is the most important aspect of cargo delivery. No goods will be released for sail before its customs status is confirmed (export/transit). For example, at export, the NVOCC will require an export declaration before the BOL (bill of lading) is issued. At import, no cargo will be released for further handling before its status at arrival is confirmed (import/transit). Cargo release paper from the port will be issued only after the port operators check all customs declarations. Hence, as long as the customs procedures are not over, the cargo will be retained. "Clearance delays have been up to six months, which raises the problem of exorbitant demurrage fees" (Patykewich, O'Hearn and Bates 2007).

6. and 10. Export/ Import warehousing- Companies providing storage facilities usually in the port or near the port. At export the warehouse is needed for LCL shipments to be collected and consolidated into a FCL. If the NVOCC company does not own storage facilities they outsource the service from a warehousing company or an overseas agent. At export the goods can be placed and collected in a general purpose warehouse, but at import, unless the goods have been cleared already, they will have to be placed in a bonded warehouse (Sudalaimuthu and Raj 2009: 322).

7. and 9. Port of loading/unloading operators- Port employees/ companies who are engaged in port activities such as: loading/unloading of containers, storage, distribution as well as documentation (Haezendonck 2001: 10).

8. Container lines- or otherwise called "shipping lines" are the ocean carriers who trade containers and have pre-defined routes of sailing. Most of container lines, such as MAERSK, MSC, CMA CGM own their own vessels. Nowadays container lines have enlarged their spectrum of services into bigger value added packages, offering to important clients a full shipping package (Song and Panayides, 2012).

3 FCL and LCL shipping

3.1 The Container Shipping market

There are several industrial characteristics in the container shipping business, including: high fixed costs, little difference in the service offered and a few operators accounting for the majority of the total shipping supply (Lun, Lai and Cheng 2010: 50). Professor of transport and logistics, Hans- Joachim Schramm, compares shipping lines to the airline industry in his book "Freight Forwarder's intermediary role in multimodal transport chains". The process is quite similar, but more formalized and conservative, with different kind of problems, such as: low visibility because of a small number of carriers operating ships; complicated routes scheduling; built on personal expertise and long tradition; trip/voyage lengths are much longer (Schramm, 2012: 168). In sea forwarding, containerised trade is made possible by over 2000 container shipping services which sustain the containerized transportation system (Informa Plc, 2007b: 222-364).

"These services call at more than 500 ports all over the world and provide opportunities for economies to engage in world trade" (Yim Yap, 2009: 5).

The Container shipping industry offers forwarding services mainly for two target markets: FCL shippers and LCL shippers. Containers are standardized carriage units and FCL shipping is a service offered by all forwarders who deal with sea forwarding. However not all of them can afford to offer LCL shipping. In order to make LCL shipping economically viable for the client, the freight forwarder needs to have at least two consignments in the same container. The more consignments can be arranged in one container, the cheaper sea freight cost will be. Not many freight forwarders have enough volume to benefit from economies of scale, this is why they apply to the services of 3PL (third party logistics) partners. In the forwarding industry any part of the delivery chain can be outsourced to a 3PL partner who has the resources to offer a competitive price. "In terms of service, the Global Freight Forwarding market can be broadly classified into following segments: Packaging, Labeling, Documentation, Transportation, Warehousing, and VAS" (value added services) (Business Wire, 2014).

The shipping sector is represented by freight forwarding companies and 3PL companies. Forwarders move cargo from one point to another. "Third-party logistics providers move, store, and process inventory, and in doing so, may provide traditional forwarder services. This balanced combination of freight forwarding and 3PL services creates genuine value for shippers" (Dechter, 2008: 26-28). 3PL providers are the ones who add value to the service, by making it easier and more efficient.

The "Inbound logistics" journal claims that freight forwarders' dominant role in ocean freight remained constant for the past 30 years, occupying about 75% of the market. It is hard to say though, which part out of 75% is occupied by 3PL companies, since one logistics company can be a freight forwarder and a 3PL logistics provider in the same time. The journal showcases the example of DHX (Dependable Hawaiian Express) company, which offers sea and air forwarding services as well as 3PL services. As its core activity, DHX consolidates truck loads based on the shipments of their clients and the shipments of their partners' clients. As a 3PL provider, DHX offers its partners to use its facilities, warehouses and truckloads. Freight forwarding and 3PL are increasingly blending (Dechter, 2008: 26-28).

The "Global Freight forwarding market 2014-2018" report states the key international freight forwarders: DB Shenker, Deutsche Post, Kuehne+Nagel International, Panalpina Welttransport Holding (Ltd 2014). These are the freight forwarders who can offer most of their services in-house, without partnership agreements with other agents or 3PL companies.

It might seem from the information above that the forwarding industry is well diversified, but because of numerous partnership agreements all forwarders have the same large offering of services. For example a company owning a warehouse can offer storage and consolidating services, along with freight forwarding services, which will be outsourced from other 3PL partners. Furthermore, this type of service will probably be convenient for the customer, since he does not have to contact several companies and agree about the price, terms and conditions. A natural question arises in these conditions- "Do these companies cannibalize on their own clients?!" In order to avoid cannibalization of own services, some 3PL providers specialize only on one target market.

Some of the LCL consolidators work only with freight forwarders and do not accept individuals or retailers as customers in order to keep their reputation as a reliable partner for freight forwarders. For example some NVOCCs offer sea shipping only to freight forwarding companies, which are reliable clients and pay the bills on time. This way freight forwarders get to work with end customers and 3PL providers save money on marketing in social media and search engines.

"Air carriers and ship lines that in the not-too-distant past employed huge numbers of salespeople to market their services have cut these staffs to the bone. Direct carriers increasingly rely on the forwarders' ability to sell their transportation services instead of marketing directly to end customers" (Dechter, 2008: 26-28).

3.2 FCL or LCL

"The difference between FCL and LCL shipments is that, whereas FCL shipment usually comprises one single unitary load destined for a single buyer, an LCL shipment comprises many different shipments, each possibly from different suppliers and each possibly destined for different consignees" (Rowbotham 2014: 339).

The book "Apparel Supply chain between Europe and China" provides a good operational explanation to FCL and LCL processes. When a FCL is ordered, the most common procedure is that an empty container is delivered from a containership yard to supplier's premises to be loaded. When the container is loaded, a container truck picks it up and delivers it to the port. Container lines allot specific, free of charge, time for the containers to be loaded and unloaded after the delivery. The full container has to be delivered to the port not later than 24 hours before the vessel's departure; all clearance paperwork has to be carried out three or four days before the departure. When the truck arrives at the port, it is allowed to enter after checking the relevant documents. Port area is considered a bonded area, so random customs inspections can be carried out. The container is then loaded onto the vessel and shipped to the port of destination. At the POD the same procedure is carried out. This time the container has to be customs cleared before it can be picked up by a truck from the port (Pfohl and Shen 2008: 47).

Unlike FCLs, LCLs have to go through a consolidation warehouse in the country of export where the full container volume is collected before the empty container is delivered and loaded for the journey. At the export warehouse, two different modes of consolidation can be carried out: general consolidation (cargo of one buyer is consolidated with other buyers' cargo having the same origin and destination) and buyer's consolidation (cargo of one buyer, shipped from different suppliers is consolidated into one container) (Pfohl and Shen 2008: 46-47). Buyer's consolidation is considered a FCL shipping since the cargo will be delivered under one Master BOL (as consignor will be stated the consolidation warehouse in the country of export and consignee will be the freight forwarder who receives the cargo at POD).

LCL shipping is a widely discussed topic, but the industry develops so fast that existing major literature sources become fast outdated. When trying to make a comparison between FCL and LCL mode of shipping, more information from journals and articles, can be accessed. It is nice to notice that many forwarding companies have on their websites articles educating people about the industry. Also, people who deal with LCL shipping day by day can be a great source of information in order to achieve a holistic view of the subject.

The benefit of shipping a FCL instead of LCL is that the number of intermediaries in the supply chain is narrowed down. There is no need for a consolidating warehouse or export packers. LCL shipments requires more handling and usually take more time to ship than FCL. "LCL is often in transit for a longer period of time, due to the freight company having to load and unload items of numerous companies. It is also possible that your shipment will be delayed until the shipping company finds enough items to fit the container" (Anjoran 2013).

Another risk is that a shipper agrees to take upon himself when shipping LCL, are the customs procedures, which are more complex than in FCL case. There is always the risk that other goods inside the same container are blocked by the Customs. Renaud Anjoran, in his blog "quality inspection" writes the confession of one regular reader who has witnessed cases of an importer losing his goods completely this way (Anjoran 2013). The problem lies in the fact that, whenever customs deem any of the parties inside a container to be suspicious, the whole container will be stopped for customs control. The procedure might take an unlimited period of time and shippers sometimes imply costs for the warehousing while the goods are being stationed. Sometimes those costs exceed the value of goods and therefore the importer renounces the goods.

Insurance costs are another expense which should be carefully calculated before deciding on shipping method. Insurance costs depend on the value of goods shipped. "China Performance Group", a full sourcing service provider in China, claims that FCL insurance can add up to 1,5 % on the balance sheet whenever the LCL shipment adds up to 3 % more (China Performance Group 2013). Packaging is also an important factor. In order to avoid possible damage from other shipments during transportation, suppliers have to pack the goods carefully on pallets and wrap them as well as put all necessary

labels, like, "Do not stack", if the goods inside are fragile (China Performance Group 2013).

3.3 The LCL industry

When choosing the transportation option, shippers nowadays have a vast variety to choose from. They can hire a full container or just some space in it or even consider air, road or rail cargo. There are many substitutes and the opportunity cost is to be considered. LCL booking has been regarded for a long time as a taboo for shippers since it was subject to many problems and misunderstandings. Mainly the inconveniences encountered can be summarized around three milestones: time, cost and workload. These are the reasons that LCL has been witnessed to offer increasingly diverse options lately (Terry 2012: 155).

The "Inbound Logistics" journal (a magazine analyzing interesting logistics cases for specialists from the area) began publishing LCL case studies in 2012, which proves that about two years ago LCL transportations started to gain more popularity among shippers. "Small- and middle-size businesses use LCL frequently, simply because they do not have the volume to fill a full load and if they waited until they had, it would mean missing delivery deadlines" (Terry 2012: 156). Another target market for LCL shipments is the "just-in time" logistics companies. Just-in-time production lines have no warehouse to keep the inventory, thus materials supply is extremely well planned and scheduled. They usually ship in little quantities and sea shipping is the cheapest option. The tactic of scheduling orders to arrive in certain intervals of time by sea shipping is called by some professionals a "warehouse on water" (Terry 2012: 156).

An example case about the opportunity cost between choosing a FCL and a LCL is depicted in "Mastering import and export management" book by Thomas A. Cook in 2012. A shipper from San Francisco had a load of 12 metric tons from Port of Oakland to Prague. The rate he had received from the NVOCC was 242\$ per metric ton. If the smallest 20-foot container that holds approximately 22 metric tons was considered, it would have cost 3900\$, whenever for 12 m³ the shipper had to pay 2904\$. The opportunity cost is 4 metric tons, by collecting which the shipper could hire a full container. (Cook, Alston and Raia 2012: 52).

The example demonstrates that freight price per 1 m³ in case of LCL is still higher than the same price in case of a FCL. Such fees as; forklift loading/unloading, documentation, demurrage, peak-season surcharges and others are fixed costs, which stay the same in FCL and LCL case. So the shipping cost per item increases when choosing to ship LCL (Terry 2012: 162). "If you are moving 14 or 15 cubic meters of cargo, it's probably cheaper to ship FCL" (Sara Mayes cited in Terry 2012: 158).

Defined transit times is a particular issue. "LCL used to be a shipper's least favorite option because there is no certainty of delivery or transit time to mainland customers", notes Joe Albelo, director of sales at Con-way Freight (Terry 2012: 158). Earlier in this research it has been mentioned that the lead times of LCLs depend on consolidation process and how fast the container cargo is collected before shipping. Even though delivery times are always agreed beforehand, one to five days delay is an industry standard. NVOCCs try to improve their services continuously and many new ideas which add value have been implemented. Some providers offer in-house-services to reduce costs, such as consolidation close to sourcing points or so called "milk runs", where goods are picked from multiple suppliers along a corridor to create a consolidated container. This option might cost less for the shipper than hiring a truck to transport their cargo to the port (Terry 2012: 158). "The ability to guarantee a certain cargo volume over time means it is possible to negotiate a competitive price rate for LCL" (Lieberman cited in Terry 2012: 158). This opportunity is mostly interesting for just-in-time inventory programs since they have programmed volumes and delivery schedules.

LCL providers are differentiating their offering and targeting their offers to different niches. For example "Con-way Freight" offers an expedited LCL service for high-value products, time-critical materials and items that have a short shelf life. Their offer "OceanGuaranteed" is a premium, day-definite and asset-based-service that is 30% faster than standard ocean/ intermodal moves, and up to 75% less expensive than airfreight. "OceanGuaranteed is also a time- strict delivery service. OceanGuaranteed freight is typically offloaded within five hours of the vessel's arrival (Terry 2012: 158-160). Other consolidators go through the pain of grouping alike shipments in one container. They avoid mixing commercial goods with shipments made by individuals, hazardous goods with non- compatible hazardous shipments (Terry 2012: 160-162). Also,

NVOCCs know beforehand which type of goods are likely to pass through a longer customs control procedure and group them separately. All these pre-emptive measures are taken to lower the shipper's risk and to optimize transit times.

The shippers' perception about LCL forwarding is changing, mainly due to the progress in the industry in this area. Among the advantages for which shippers chose LCL deliveries are: delineated costs (LCL cubic foot size is clear), flexibility (small order sizes enables to keep low inventory levels, speedier vessels (consolidators can select vessels with direct routes or fewer stops), preferential treatment (LCL consolidated containers move at higher freight rates than FCL and carriers tend to give them preferential loading) (Terry 2012: 155-162).

4 The LCL booking process

4.1 Price inquiry experiment

In order to analyse an actual LCL quote, altogether six inquiries for a price quote have been sent to different shipping companies from Finland and from China. Finland and China have been chosen because of the route Asia- Europe, mentioned earlier in chapter 1. It was also mentioned in chapter 2.2 that transportation costs can be borne either by the supplier or by the buyer, depending on the Incoterms used. Therefore, it is safe to assume that the supplier will inquire the freight forwarding price from a Chinese NVOCCs and the buyer will inquire the rate from Finnish freight forwarders. In the case at hand, the POL is Ningbo and the POD is Helsinki.

According to SITRA calculations, already a quarter of total Russian imports are transported through Finnish territory (Ollus and Simola, 2006). This and the fact that transit through Finland requires special customs clarification and further forwarding from Finland makes the route China- Finland- Russia more difficult to quote, but very often in demand by Russian shippers. Russian companies are often end- customers of freight forwarders in Finland. But, in authors experience, Finnish logistics companies who have no direct contracts with the Russian parties avoids working with them, because of the risk that the Russian counterpart might fail pay the ordered forwarding. For the thesis at hand, it was decided to formulate a price- inquiry in the name of a

Russian retailer- "Dom7 OOO", shipping the goods from China to Russia through Finland.

Retailers and individuals who ship products for the first time are the most confused and little educated clients in this area. This is why, the inquiry at hand asks quotes not only for sea freight forwarding but also for transportation to the POL and other services that might evolve from the process. The inquiry itself can be viewed in Appendix 1.

When going through the steps of booking LCL shipping, it is safe to assume that a shipper with no earlier experience and contacts in the area will search for possible freight forwarders with a simple Google (or other search engine) search. When typing "sea cargo Ningbo- Helsinki" in Google search, some of the Chinese freight forwarders pop up first, then in the end of the list, Finnish NVOCC companies are displayed as well. The screen shot with the search results is available in Appendix 2. Shipco and Nordic-on, appearing in the screen shot are the two biggest NVOCC companies from Finland.

The experimental price inquiry for this research was sent to two Chinese freight forwarders, Seabay International Freight Forwarding Ltd and Legende Logistics Co. Ltd; and four Finnish freight forwarders: Sa-Tu Logistics, Wcargo Oy, Shipco and Nordic-on. The criterion for choosing these companies is the fact that all of them claim to offer LCL consolidation services on their web-sites.

Out of six inquiries sent, five companies replied. Wcargo Oy answered that they consolidate and ship only the cargo which goes through their warehouse in Vaalimaa, so they did not offer a rate but the other three companies offered their quotes. Since price information is a company secret, prices will not be disclosed in this research, but instead a fair comparison and observations on the quotes will be presented. The first observation is about the format of the received quote. As an inexperienced retailer one would expect a total sum, a final price which therefore could be summed up to the value of goods and have an approximate understanding of the total costs of the goods. Instead all three quotes were a list of rates, which probably only a specialist from the industry would understand. But after longer communication with the freight forwarders the rates have been explained to the author. The most common rates quoted were:

- Sea freight fee FOB Ningbo – Terminal Helsinki
- BOL fee (bill of lading fee)

- Release fee (the fee taken by the carrier for releasing the cargo to the consignee)
- Harbour dues- (POD charges for handling the goods, the port invoices the NVOCC and the NVOCC passes this cost forward to the consignee)
- LCL fee- (fee for handling LCL cargo, it is being charged per W/M)
- Handling fee
- Terminal handling/ THC- Terminal handling charges, are the costs incurred at POD, when the LCL shipment is unloaded from the container and stored until the customer picks it up. It does not include storage charges. If the shipment will be stored more than the allotted free time, the consignee will incur extra warehousing charges.
- ISPS fee- International Ship and Port Security Code fee for maintaining a set of security measures on ships and ports all over the world. ISPS- was introduced in 1974 by IMO in the International Convention for the Safety of Life at Sea (SOLAS) (Imo.org, 2015).
- Pallets fee- the fee for arranging the cargo on pallets, in case the supplier provides the cargo unpalletized.

None of the Finnish freight forwarders offered a rate for transportation from a Chinese supplier's premises to the port, even though it was requested.

From the Chinese freight forwarders contacted, Seabay International Freight Forwarding Ltd did not answer at all, but Legende Logistics Co. Ltd answered quite fast, within one day. They quoted the freight price and the customs clearance fee in China as well as their rate for the BOL, the rest of the rates where the charges for local handling at POD, which are charged by their agent in Finland from the consignee, indicated on the BOL. They have also indicated the price for transporting the goods from supplier's premises to the port and indicated who is their agent at the POD.

Analyzing the replies received, it becomes obvious why booking LCL cargo is a difficult, time-consuming process and requires knowledge of the area. The whole delivery process encompasses freight agents from two countries, the POL country and the POD country. When the rate is inquired from a Chinese freight forwarder, he will quote the local charges at POL, the freight rate and the charges at POD, which will be charged by their agent in the country of destination from the consignee (or the company to whom the goods are released). As it was mentioned in chapter 2.2 the most common

Incoterms used when shipping from China are CIF, CFR and FOB. In case of CFR and CIF terms, the supplier in China will prepay the freight and local charges at POL, basically he will pay for all the charges indicated by Legende Logistics except the ones mentioned to be the charges of their agent in Finland. The charges for handling at POD will be invoiced to the consignee (from above mentioned rates, local charges are all except sea freight and BOL fee). In case of the FOB Incoterm, the supplier in China will pay for all the local charges, up to which the cargo is loaded on the vessel, but the freight transportation charge and local charges at POD will be borne by the buyer. In our case, the supplier will pay all the charges indicated by Legende Logistics but the Freight cost and charges at POD. The freight cost and local charges will be invoiced by the Finnish agent from the consignee.

This practical experiment proves how important it is for a shipper to understand the terms and conditions of shipping. The rate requested in the case at hand is not based on any Incoterms, so the Russian buyer "Dom7 OOO" will have to choose from the rates indicated, which ones will be carried by him and which ones will be paid by the supplier, based on the Incoterms later agreed with the supplier.

4.2 Case study- "Chinese phenomenon"

"Chinese phenomenon" is a name that was given to an interesting circumstance, discovered during this research. When analyzing the quotes received from Finnish and Chinese freight forwarders a striking difference in the rate for freight transportation was noticed. At the time of the inquiry, the price offered by Chinese company was 20 USD per W/M and the price offered by Finnish companies was in medium 50 EUR per W/M, which is more than double the Chinese price. The first conclusion, is that the Finnish NVOCC is buying the freight from the Chinese NVOCC and then puts a 100% mark up. However, if to multiply the Chinese forwarder's rate by the load capacity in a 40ft container, it would not cover even the average rate for a FCL, which at that time was 1400 EUR, judging by CFFI (En.shippingchina.com). Further, in this research paper a case study is presented which explains this phenomenon.

Aleksej Stolichnyi, who has been interviewed for this thesis, is a shipper from Russia who owns several bridal shops and has shipped his first LCL consignment in 2009. The interview questions for shippers can be viewed in Appendix 4. From that time he has

acquired a lot of experience and contracts with several reliable freight forwarders. Because of his acquired experience in this field, many of his acquaintances, also retailers from Russia, have asked him to arrange the shipping process of their goods, for a fee. So nowadays Aleksej has a part time job, besides his entrepreneurial activity, of shipping and monitoring the delivery of his clients' goods. Among the goods that his clients ship regularly are: spare parts, cosmetics, clothes and electronics. Aleksej has built an entire supply chain. He ships all the consignments from Chinese ports to Helsinki, because he says it is faster and less problematic than shipping directly to Saint Petersburg. Because consignments arrive at different times he stores the LCL shipments in a logistics warehouse in Finland until he can consolidate a full truck, out of his and his clients orders. When a full truck is consolidated he contacts a trucking company from Saint Petersburg to deliver the goods to the destination.

When asked, "What is the most difficult part in the whole shipping process?!", he mentioned the pricing and booking process. Aleksej has told that when receiving an order from his clients he needs to quote a fixed price for freight forwarding which will as well include his fee. The price needs to be definite, because, based on it, his clients calculate all the cost for the goods and decide whether it is profitable or not to ship this way. Based on the agreement Aleksej has with his clients, he has to quote them the final price and unless any force major situations occur, extra charges, if any occur, are borne by Aleksej. Usually Aleksej orders the freight from different Finnish freight forwarders and all the freight charges are paid by him, since his clients have EXW based contracts with Chinese suppliers.

One time he suspected that the Finnish forwarder was charging too much and inquired the freight price from a Chinese NVOCC. The price offered was much cheaper and he decided to ship through the Chinese NVOCC and make more profit for the difference. Aleksej says that when the goods arrived in Helsinki port he was messaged by the local freight forwarder with an invoice which included other charges than just the local handling charges and therefore the total invoice was much bigger than he had expected. In the long run he did not gain more profit, since the final rate proved to be the same, as before, when he shipped via Finnish Freight forwarders. The additional rate that local freight forwarders charge for undercharged cargo at POL is CISF. CISF (Chinese Import Service Fee) is basically the difference in rate which Aleksej did not pay to the Chinese NVOCC.

Very few shippers know what the rates they are invoiced with actually mean. So they usually accept all the costs in order to receive the shipped cargo. Such types of tricky moments in freight forwarding are not to be found in major literature, but the logistics blog- "trickyfox.com" explains the dilemma. CISF is basically a freight charge which emanates at Port of Origin but is sent forward for collection to the importer in the country of destination (Freightfox.com 2012).

In Aleksej's case, his clients have EXW based contracts with suppliers and this is why he, thus the buyer, would end up paying all the transportation and POD handling costs anyways. But what if the buyer has a CIF based contract with the Chinese supplier, then the one who bares the entire freight costs, judging by Incoterms 2010, should be the seller in China, and not the buyer in Finland (Rowbotham 2014:142).. The same article in "trickyfox.com" claims that whatever charges for freight are being invoiced to the consignee, in case of CIF or CFR Incoterms, should be rejected by the buyer and sent for collection from the seller (Freightfox.com 2012).

The "Chinese phenomenon" has been confirmed and described in more details by Stanislav Savonov, sales manager at DSV Air & Sea OY. In Stanislav's opinion it is truly difficult to predict the final price, whenever the buyer from Finland, addresses for a sea freight quote to a Chinese freight forwarder.

After being told about Aleksej's case, Stanislav told us the story behind the curtains. He says that the price of 20 USD/ W/M quoted to "Dom7 OOO" by Legende Logistics Co. Ltd is truly unrealistic and if it was the same difference in price for Aleksei, that price was unrealistic too. Stanislav explained that Chinese forwarders often sell container space at a much cheaper price. They afterwards make up for the loss by putting it on their partners' shoulders in the country of destination to collect the rest of the sum from the consignee when releasing the cargo. Chinese forwarders can as well resell the cargo, while it is on the way, to bigger NVOCC companies who have binding contracts or are connected through an alliance with logistics agents all over the world.

For example, in our case- inquiry, Legende Logistics was happy to sell us the freight for whatever price and afterwards, they would resell the booked container space to a bigger player on the market- e.g. "King Freight Logistics". "King Freight Logistics" would buy it at a loss and place the goods for sail in a container booked from- for eg. "Maersk China". When the container arrives in Finland, "Maersk China" releases it for further

handling to "Maersk Finland". "Maersk Finland" and "Maersk China" are the carriers in this case, they will further release the container to the consignee stated in King Freight Logistics' BOL. As "consignee" in its BOL, King Freight will name their own agent in Finland, who could collect the remaining charges from the final consignee when releasing the goods.

The above described scheme is enabled by the multiple BOLs issued from one carrier to another. The BOL is a document of title which contains the terms and conditions against which the goods should be released to the named consignee (Investopedia 2006). In the case at hand, if "Dom7 OOO" in whose name the price for freight forwarding was inquired, would have booked the cargo from Legende Logistics Co., they would issue a non-negotiable BOL (see the Key terms and abbreviations) in the name of "Dom7 OOO" stating the sail date, number of packages, weight and volume of goods. Then they would issue a negotiable BOL (see the Key terms and abbreviations) from their name to King Freight Logistics, transferring by this, the goods for further handling to King Freight Co. The afore mentioned, in its turn would issue another negotiable BOL to their partner in Finland, stating in the consignee field: "Release to the order of the holder of original BOL/ Telex release/ Copy of BOL no:....(the number of non-negotiable BOL, made between "Legende Logistics" and "DOM7 OOO"). The chain is better visualized in Figure 3.

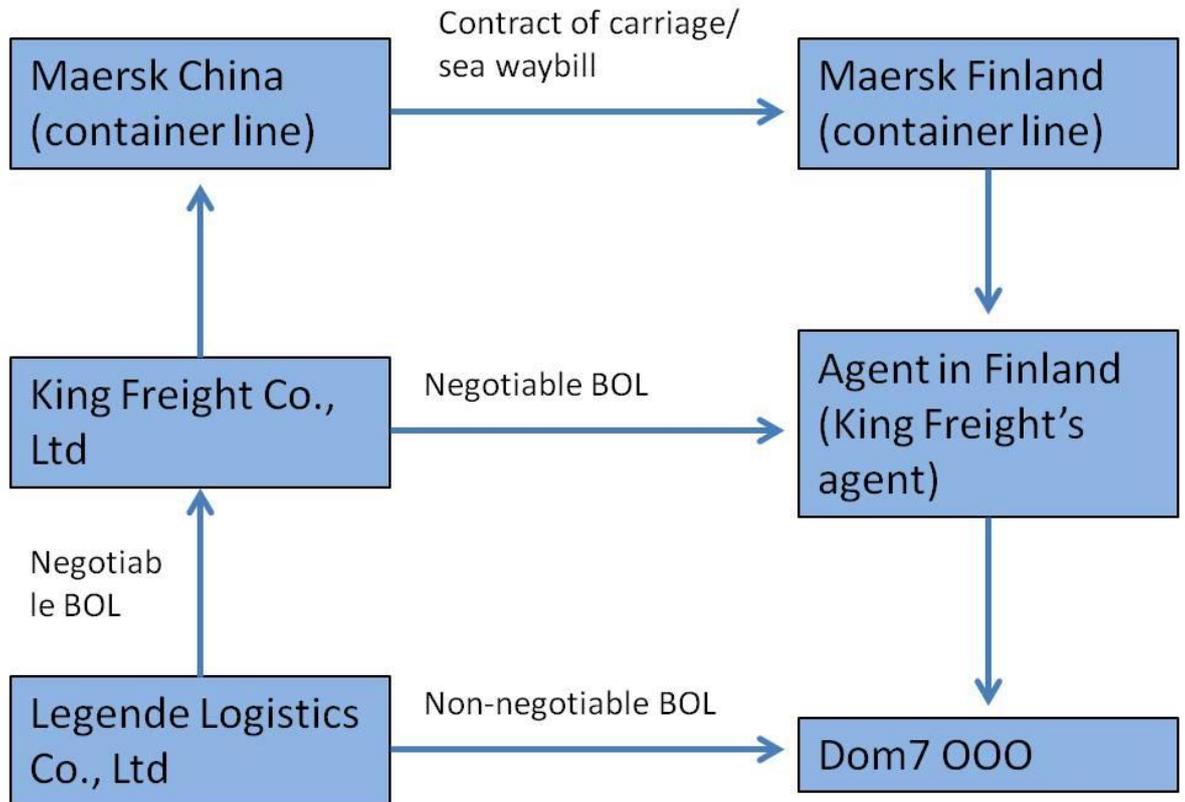


Figure 3. Transmission of one consignment between ocean carriers.

Thus the consignment can be resold while being on the way. In order to ensure the full payment of the ocean freight, the NVOCC can set specific terms in its BOL, for example they can state that the goods should be released against the original BOL presented by the consignee to the NVOCC at POD, but the later will not be sent by the carrier at POL to the consignee, until the full payment of freight is received.

Juha Nissinen (country manager at Shipco OY) has confessed that Chinese business culture affects the way shipping is done. Shipco, as a logistics partner of Chinese NVOCCs gets instructed sometimes to charge the consignee extra. J. Nissinen says that extra charges very often come as a surprise to the end customer and not always they agree to pay.

5 Management of ocean freight contracts

5.1 Targeted audience

Ocean freight is a complex industry, unharmonized transportation rules, customs clearance procedures and complicated quotes can scare away many potential clients. When asked how do they manage their ocean contracts and what is the target market they opt for, Juha Nissinen from Shipco OY and Tommi Antikainen from Nordicon OY answered that they work solely with freight forwarders.

The reason that such NVOCCs like Shipco and Nordicon work only with freight forwarders is very simple. Freight forwarders are industry educated clients, who know the forwarding procedure and understand its milestones. It is easy to come to an agreement with these clients and have a long term, reliable partnership, in which each party understands its responsibilities and engagements. Some of the reasons behind targeting a specific group of customers have been pointed out in chapter 3, where the role of a 3PL partner has been discussed. In continuation to this, Tommi Antikainen (general manager of Nordicon Finland subsidiary of Nordicon AB) mentioned- "Working solely with freight forwarders is a priority to us. We do not usually receive any price inquiries from retailers, distributors or individuals because we do not market ourselves to them. Anyhow, if a consignment comes to Finland through our system and it has a direct consignee, we do not perform the customs clearance for it."

It is usually the expectation of a direct consignee (any retailing or distributing business) that after ordering the cargo from a Chinese supplier, they would simply come to pick it up when it arrives to the destination or furthermore, it will be shipped to their address. It takes time and efforts to explain to each of such customers that they have to pay terminal charges prior to receiving the release note, and that they have to custom clear the cargo in order to be able to transport it further. Such NVOCCs as Nordicon Oy and Shipco Oy do not want to spend the effort and time for these procedures, since their specialization is completely different. By narrowly specializing only in LCL consolidations they manage to constantly add value to it and provide a reasonably priced qualitative service. Furthermore Juha Nissinen (country manager at Shipco Oy) considers that working with end clients would position Shipco OY as a competitor to their clients- freight forwarders.

When being asked if FCL is in demand, and if their clients address to them for FCL bookings as well, both NVOCCs answered "no". "FCL was one of our services long ago, but we dropped it because shipping lines were selling it actively to freight forwarders, so it was no longer needed from us" (Tommi Antikainen, 2015). The main disadvantage foreseen for whole industry is that shipping lines are now penetrating markets, in which freight forwarders usually operate, capturing a share of the end customers (Rowbotham, 2014: 10-20).

Axmed Abdula, a consultant for businesses that wish to enter the Chinese market, is currently offering the same freight forwarding services as Aleksej Stolichnyi. During the interview, Axmed confessed that his clients mainly have large FCLs with heavy industry cargo: steel, machinery or even cars. For him the search for ocean carriers is fairly simple; he uses a software which can access several NVOCCs and container lines at the same time. So he automatically sends his inquiry to several companies. He did not mention what the platform was, but he told that he received a lot of offers in a very short time. Axmed also mentioned, that some shipping lines, such as CMA CGM, MAERSK, MSC, contact him personally if they have routes exactly on Axmed's inquiry. Axmed says that he is mostly working only with container lines as ocean carriers and it is fairly simple for him to book consignments.

5.2 Alliances

Un-standardized transportation rules, diverse national laws and the abundance of diverse logistics agents makes it difficult for a customer to find the needed logistics agents for a specific supply chain. Transportation logistics is a binding industry, the risk and responsibility for a consignment is transmitted from one agent to another along the line. In order to exercise more control over the process some big logistics companies, like DHL for example, have their own offices in almost all over the world. Other companies prefer to work through partners in the countries, where they have no direct presence.

During the interview, Juha Nissinen from Shipco Oy shared that Shipco has its own subsidiaries in many countries over the world, but in the countries, where volumes are low and it is not profitable to open an office, they work through reliable partners. In or-

der to simplify the flow of information from one subsidiary to another and operate based on harmonized rules all around the globe, Shipco and its partners are members of "World Wide Alliance" (WWA). WWA exercises the following functions:

- Creates a network of NVOCCs, where each carrier would easily find a partner to whom or from whom to forward the cargo. Let's say, if Shipco OY received a booking for marine transportation from Helsinki to Toronto, Shipco OY would contact its agent in Toronto, which is - "Shipco Transport Inc", and arrange the delivery (WWA and J. Nissinen 2015).

- Allows fast exchange of information. By enabling each agent along the supply chain to update cargo' status, all of them, as well as the customers who have access to the system, can keep track of where the cargo is at the moment. Customers have access to sailing schedules, arrival dates and global rates (WWA and T. Antikainen 2015).

- Speeds up the booking process. Important clients who have many consignments can not afford to spend time waiting for prices, and then for booking confirmations. Those of them who want to use the platform, are allowed to log in, calculate the price and make the booking online (Juha Nissinen, 2015).

Unfortunately not so many clients are eager to sign up for the service, Juha Nissinen says that only a small part of their clients use the WWA platform, the others are reluctant to using it because it requires time and effort from customers side to understand how the platform works.

Tommi Antikainen shared that Nordicon OY is also a part of a global alliance called the GCA (Global Consolidation Alliance) (Gca-online.net). It basically performs the same functions as WWA and occupies the fourth place in the top global NVOCC alliances after WWA, Ecu Line, and Vanguard. ICargo is the fifth growing alliance, mentioned by T. Antikainen, trying to gain the market now, but it still has a long way to go in terms of the IT solutions offered. Global NVOCC networks facilitate the exchange of information among members, every partner within the alliance operates on a common set of rules facilitating the cargo forwarding between continents, countries and regions.

Another large network which unifies the other single alliances, like WWA, Ecu-line, Vanguard and GCA (about to become a member) is INTTRA (Tommi Antikainen,

2015). INTTRA is a single access point for freight forwarders who deal with ocean shipping (Intra.com). Through this platform Nordicon's clients- freight forwarding companies, would be able to access the full range of prices, schedules and routes offered not only by Nordicon through its alliance GCA, but also by Shipco, through WWA and others. Technically INTTRA represents a free market network, where NVOCCs compete on offering the best services for best prices on a single platform (Intra.com). Some of the freight forwarders, who use INTTRA to book their ocean shipments are: DHL, Geodis Wilson, UTI logistics, Damco and others (Intra.com).

The range of online solutions for the industry seems to be vast. The only problem is that it requires time and effort for freight forwarding companies to log in, upload the necessary plug-ins and teach its personnel to use the new gadgets or IT solutions. Judging by the freight forwarders published on INTTRA web site- DHL, Geodis Wilson, Damco... etc. seems that only large freight forwarding companies who have many ocean freight bookings per day are willing to use it. In its essence INTTRA is an easy solution meant to connect the right NVOCC with the forwarder. Even though the platform is still in development as Tommi Antikainen claims, it looks like new technologies for speeding up the booking process are penetrating the industry.

5.3 IT booking solutions for shippers

As it became clear in the previous chapter, the ocean forwarding industry does offer solutions to facilitate the booking process. So far all those platforms concerned the ocean carriers and freight forwarders. For example in order to register as a member of INTTRA one has to be a freight forwarding company, a NVOCC or a large retailer/ producer who has its own logistics department dealing with exports and imports, such as Lipton, Michelin and others mentioned on INTTRA website (Intra.com). The whole registration process takes about one working day (to register and to receive the confirmation).

When being asked how do they facilitate the booking process for their clients, all the interviewed specialists from freight forwarding companies answered to have a personal online booking system. For example clients of Nordicon and Shipco can calculate the price and book the shipment right on companies' web pages. Stanislav Savonov, from DSV, also said that they offer an online calculator and an online booking system

through their web site, which the writer found useful herself while working as a logistics assistant at Wcargo Oy.

From the interviews undertaken it has been found out that freight forwarding industry has a very scarce offering in terms of online booking solutions for shippers. INTTRA is a very good IT solution since it connects all the NVOCCs and freight forwarders, but it works only for logistics companies. When researching what platforms are there for shippers and individuals who want to book LCL consignments, following solutions pop up: Icontainers (a Spanish web site which gives price options and accepts bookings online but only to and from Spanish ports), CargoSmart (offers a private-label search interface which can be placed on third party websites) and Linescape (shows different ocean carriers' sailing schedules for FCLs but does not offer a booking system) (Icontainers.com, Cargosmart.com, Linescape.com). These types of solutions have been around since 2001 but they seem to be focused on B2B operations more than the end customer.

The idea behind a web platform which displays the prices and allows online bookings is to facilitate and improve customer's experience. Shippers would not have to inquire prices from several carriers/ freight forwarders over the world or wait until they are approved to use a certain platform, but have one single place where all the quotes are available without registration. Another attempt at constructing such a platform has started in 2014 by a company called "Shipstr". Shipstr is a start-up in its initial stages of testing the demand in the market, as its site clearly witnesses about (Lock, 2014). It has been introduced to the public on Tech Crunch Disrupt San Francisco 2014 conference. The idea behind Shipstr is to have an easy to use platform where shippers and freight forwarders would be able to view the ocean freight prices and book all the needed logistics services along the supply chain. The founder of Shipstr- Max Lock claims: "Any industry that delivers poor service for high prices deserves to be disrupted and that is why I created Shipstr" (Shu, 2015). For its initial launch Shipstr is targeting only the small and medium businesses who want to transport FCLs from Ningbo port to San Francisco port, USA (Shu, 2015).

6 Conclusions and recommendations

6.1 Conclusive remarks

One of the main objectives of this research was to attain knowledge and gain insight into the LCL booking process. While necessary data was gathered and analysed in order to achieve the stated objective, the characteristics and problems in the LCL booking process were defined and several solutions to develop the process have evolved.

Four research questions were formulated in order to answer the problem statement:

What is the sea shipping process and what does it involve?

The main findings pointed out throughout the thesis, answering the above stated question are:

- Ocean shipping process is legally guided by specific organizations, whose main scope is to distribute the rights and obligations between agents. However, pricing transparency and container booking process are left under the supervision of national law and partnership contracts between freight forwarders.
- Incoterms are a very important part of concluding a contract of sale or purchase of goods between overseas parties. It has been proven that depending on the Incoterm decided between the buyer and the supplier the final cost of goods can change dramatically. Not fully understanding the aspects of the Incoterm chosen in a transactions can result in additional charges for the shipper.
- Sea shipping involves a lot of intermediaries. The process itself is so complicated that it involves separate logistics agents and carriers for specific parts of the supply chain. Ocean shipping, involves possibly the biggest number of middlemen out of all transportation modes. The more logistics companies are involved in the process the more difficult the communication between the partners becomes, thus offering a freight quote becomes slow and difficult.

What is the difference between booking a LCL and a FCL shipment?

This research question focuses on the assumption that a FCL is regarded as an opportunity cost for a shipper who wants to ship a LCL shipment. It has been pointed out that fixed costs increase dramatically the total price for LCL. A LCL shipment requires a consolidating agent and consolidating warehouse which adds up to the total shipping cost. LCL transit times are usually longer than FCL's because it includes the consolidating time with other shipments.

It has been demonstrated that unless the shipment is less than 20 M³ in volume it is more convenient to ship a FCL. But waiting to consolidate a FCL for a shipper who has generally low volumes triggers other complications, such as: additional storage costs, increased transit times, less flexibility.

How do freight forwarding companies view the LCL booking process?

In this chapter it becomes evident that NVOCC companies can have two types of customers: freight forwarders (who act as logistics agents for cargo buyers) and shippers (retailers and distributors who decide to book the shipments themselves). From the interviews performed it has been found out that LCL booking process for freight forwarders is a much simpler and clearer process. NVOCCs who serve freight forwarders have an arranged routine with their clients. The target is to get the clients use their online interfaces, it minimizes the quoting time as well as the booking process. Other freight forwarders who hesitate to use the online gadgets are being sent a price list, based on which they can calculate the prices individually.

How do shippers regard the LCL booking process?

Shippers usually require individual quotes, this is why the quoting process takes much longer. The price inquiry experiment presented in chapter 4 included other services than the ocean shipping, like transportation from supplier's premises to the POL. As it could be witnessed, only one company answered with a full quote containing rates for all the services including the sea shipping. This is mainly due to the fact that in order to quote additional services, other than LCL shipping rate, the NVOCC has to inquire the price from its agents, which increases the quoting time.

In conclusion it has been found out that shippers mainly regard LCL booking process as being overly complicating for the following reasons: receiving an answer to the inquired quote can take more than one day, the rates quoted need to be explained in more detail, to figure out the final price is the shipper's responsibility. The final price in shippers' opinion is generally difficult to estimate because of currency fluctuations, sailing schedule changes, price lists updates and probable force majeure situations for which the end customer will be invoiced.

6.2 Recommendations

In this section recommendations are provided for LCL consolidation service providers, as well as shippers, on how to accelerate the process of booking and avoid misunderstandings. In order to draw a conclusive list of recommendations resulting from this research it is important to point out the second objective pursued, which was to find the answer to the question: "What are shippers' expectations from the booking process?"

Shippers are the most difficult clients, as it has been pointed out in this research before. They do not possess the industry knowledge, this is why, the booking process should be simplified and drawn to meet their expectations.

In order to simplify the booking process, the one needs to start from the booking inquiry. This research paper concluded that the inquirer has to make it clear in the price inquiry what is the POL, POD and the Incoterm, based on which the goods are shipped. Let's say if a shipper is inquiring for the rate for transportation from Ningbo to Helsinki and his agreed Incoterm with the supplier is CIF, he should indicate so in the inquiry- e.g "price inquiry Ningbo- CIF Helsinki". This way the freight forwarder can understand which party is paying for what services.

It has also been established that whenever there is an inquiry about the price of services, that the inquired party does not directly provide, the answer will be delayed, if any answer will be provided at all. It is advisory that, if the shipper wants a door to door delivery, he should address to freight forwarding companies. They will calculate

the final price and take care of cargo's forwarding at every step of the supply chain. A shipper would not have to worry about additional charges or bottlenecks on the shipping line, the forwarding agent has it all agreed for him. However, as it became evident in this research, many shippers try to avoid the freight forwarders' fee and act on their own. Ultimately they still need to outsource the customs declaration part to a freight forwarding company.

Unexpected costs and the frustration of receiving a bill much higher than the sum expected initially could be avoided. Such situations usually happen when the supplier arranges the delivery and tells the buyer the approximate sum he will have to pay for local charges at POD as quoted by supplier's agent in the country of origin. In this case the shipper should inquire from the carrier in the country of origin who is their agent in the country of destination and re-inquire the rates from the latter. After the shipper receives all the prices from separate service providers he can sum up the rates and have a clearer picture of the final invoiced sum. Also, there is one recommendation given by S. Savonov during our interview- "In order to receive an ultimate sum for shipping with no over charges, one should always inquire the shipping price from the carrier/ NVOCC in the country of destination"

The other inconvenience is the price information which, in this industry, is not easily available and transparent. The whole booking process seems not to have developed a lot during the past years. While conducting this research, it has been discovered that NVOCCs are becoming more and more interested in using online platforms for communication, both with their overseas partners and local customers. Although not all the platforms presented in chapter 5 are directly marketed to shippers they serve the purpose.

Industries like hotel booking, airline tickets booking and even aircargo booking have integrated their offering in a number of easily accessible online booking sites. However, the marine cargo shipping industry still remains behind. The majority of platforms presented in this research are directed mainly to freight forwarders because they accept only freight forwarders to register and provide services tailored to them. Also, the other online booking sites which claim to work for both freight forwarders and shippers have long registration times and are not easy to use for an end customer.

The only promising, easy to use solution, found out while conducting this research is the "Shipstr" idea. If the platform would work the way it promises to, it would truly be a disrupting idea for the industry, hopefully later on, penetrating the LCL market as well.

Based on the findings of this thesis, it seems that there is potential for a platform that automates the LCL booking process and gives instant quotes to be developed. It is unclear whether "Shipstr" will make a significant impression in the market. However its existence means that there is interest in producing a technological product that solves the particular problem of booking LCL consignments. That being said, it will be interesting to observe how the platform develops, whether competitors take notice and try to innovate in this market or stick to the old closed market, dominated by agreements and binding contracts. The current shipping industry is not transparent and does not always work to the full benefit of the end customer. Many of the findings in this thesis suggest that exactly such liberalisation of the services, as Shipstr platform, could be of use to customers. It would also create better conditions for LCL shipments to be ordered by ordinary people.

An interesting potential topic for further research would be to test out the idea behind this platform and to explore whether it brings positive change in the market and if it really solves the problems of consumers.

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Price inquiry

"Hello,

I am writing to you from a retailer shop for home accessories in Saint Petersburg, Russia. I have recently found a new supplier for household supplies (toilet seats, blankets, pillows...) from China and I have planned to ship a first batch of about 15 M3, 3000kg or more, in the middle of March.

On your site, I have read that you ship LCL cargo so I would like to order the LCL transportation from you. I will need from your company to organize the transportation from Ningbo port to Helsinki. I will afterwards send a truck to pick up the cargo to St. Petersburg.

I am in the process of making my order to my supplier- "Smile Market" now, and I am not sure of the final volume of my cargo. I would like to get the prices for 1 M3 from you, because I plan to ship regularly and the volumes will differ.

My supplier- "Smile Market" is located in Lingyun 3 district, Yiwu, Zhejiang
Please, can you tell me if you can organize also road transportation from the supplier's address to nearest port Ningbo? Since I would like to consider your price before I agree about Incoterms with the supplier.

How much would cost the container shipping per 1 M3 (Ningbo- Helsinki)?

Can you also quote me for Transportation from supplier's premises to Ningbo port?

Waiting forward to your reply,

Victoria Maxim,

"Dom7 000"

Nevsky prospekt 82

191011 Saint Petersburg, Russia,

+7 8123148215"

Screen shot of "Sea cargo Ningbo- Helsinki" search results on google.com

The screenshot shows a Google search interface with the query "sea cargo Ningbo- Helsinki" in the search bar. Below the search bar, there are navigation tabs for "Web", "Maps", "Images", "News", "More", and "Search tools". The search results are displayed below, showing about 28,700 results in 0.24 seconds. The first four results are listed below.

About 28,700 results (0.24 seconds)

Sea Cargo Shipping From Ningbo Shanghai to Helsinki ...
 seabay.en.made-in-china.com › Product › Sea Freight
 China **Sea Cargo Shipping From Ningbo Shanghai to Helsinki** Finland, Find details about China Sea Shipping to **Helsinki**, Cargo Shipping to **Helsinki** from Sea ...
 You visited this page on 2/27/15.

Ningbo Shipping/sea Freight/forwarder To Helsinki Finland ...
 www.alibaba.com › Business Services › Logistics Services › Sea Freight
 Reliable **Ningbo Shipping/Sea Freight/Sea Shipment to Helsinki** Finland Europe. US \$35-65 / Cubic Meter (FOB Price). 1 Cubic Foot (Min. Order). 200 Cubic ...

Shenzhen Sea Freight To Helsinki/guangzhou Ocean Cargo ...
 www.alibaba.com/.../shenzhen-sea-freight-to-helsinki%252fguangzhou-...
 Shenzhen **Sea Freight To Helsinki/guangzhou Ocean Cargo** To Hanko/shanghai Shipping Service To Kokkola/**ningbo** Shipping Forwarding To Kotka, You Can ...

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Interview questions for professionals who work in shipping industry

Persons interviewed: Tommi Antikainen (general manager at Nordicon Finland), Stanislav Savonov (sales manager at DSV Air & Sea), Juha Nissinen (country manager at Shipco OY)

1. Could you introduce yourself and the company you work for, please?
2. Can you tell us who are your company's potential clients (target audience)?
3. Do you offer solely LCL services or do you offer FCL transportation as well?
4. What are the routes on which your company operates (Asia- Europe, America- Europe, etc.)?
5. Does your company operate through agents or do you have direct presence in the countries you ship from/ to?
6. How do you make your cargo price visible for your clients, do you have any price lists published on your website/ price calculator, or do you send price quotes based on inquiries you get via email?

Interview questions for shippers

Persons interviewed: Aleksej Stolichnyi (shipper from Russia) and Axmed Abdula (shipper from China)

1. Could you introduce yourself?
2. Could you tell us more about your experience as a shipper or as a customer of shipping industry?
3. What do you consider to be the most difficult part of the shipping process?
4. Can you tell us about any interesting cases you have had while shipping?
5. Why do you think your clients apply to your services instead of shipping by themselves?