

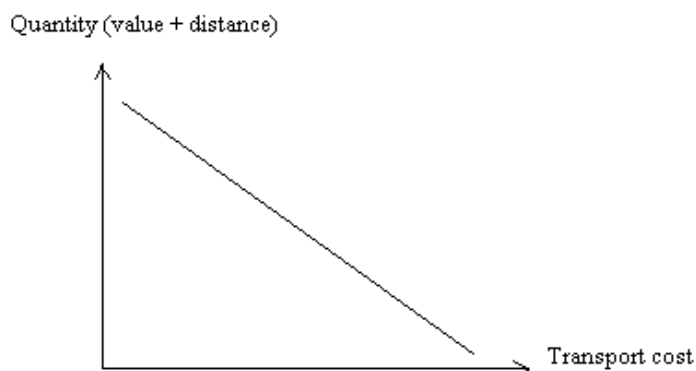
CHAPTER TWO

REVIEW OF LITERATURE

This chapter reviews the literature in 4 main areas along with a summary: (1) The theory of transport demand & quality of service, (2) Causes of damage during marine transportation, (3) Interview to determine causes of damage, (4) Relevant research.

2.1 THE THEORY OF TRANSPORT DEMAND & QUALITY OF SERVICE

According to Jakkrit Duangpastra (จักรกฤษณ์ ดวงพิสดรา, 2543), transport demand occurred when there is a place utility for the cargo. The transport from Japan to Thailand means that the exporter in Japan can make more profit in Thailand when compared to the production cost in Japan.



Meanwhile, this transport demand also depends on cost and quality of service that the carrier gives to the user (United Nations, n.d.). When transport cost is low, demand will increase.

But for the quality of service, it means the value that customer agrees to pay for the transport service based on their assessment before selecting the service from each carrier. Generally, the user will consider the following factors:

1. Transit Time – the user wants to use the shortest time.
2. Reliability – the user wants to ensure the carrier's service.
3. Accessibility – convenience of the user to that service.
4. Capacity – sufficient and adequate equipment for service.
5. Security – to prevent any damage or loss to the cargo.

The scope of this study will focus on the security factor that the consignee requests from the carrier.

2.2 CAUSES OF DAMAGE DURING MARINE TRANSPORTATION

Although the causes of damage can be grouped in several different ways, reviews of relevant literatures have concluded that there are three major causes that damage the cargo during marine transportation: transportation equipment, natural disaster and human error. (Lower-Hill, 1996; Hughes, 1989; Sparks, 1995; Vanplantinga, 1984)

The first cause is the equipment used. Old and inappropriate equipment can lead to risky transportation. Old containers tend to cause damage to the cargo therein because the breakage or tiny hole may be found on the container's ceiling and side walls. When there is a downpour en route, such rain will penetrate through these tiny holes and contact the cargo contained inside. In case of wet damage during sea transportation, it is seriously related to the condition of hatch covers. Defects on the hatch covers will lead to the penetration of rain and/or seawater to the bulk cargo in the vessel hold. According to Sparks (1995, p.141), the most dangerous thing for steel cargo is contacting with seawater because rust will generate and expand on the steel surface quickly.

Another cause is natural disaster. Typhoon and inundation are two types of calamities that are mostly found. Disaster by typhoon is serious for the land area as a result of flooding and strong winds. At the same time, it is very serious for the maritime transport as well. When the vessel encounters heavy weather of more than force 8 winds on the Beaufort's scale, a gale warning can occur as the vessel will pitch and roll heavily (Gale Warning, 2006). For force 11 winds, the wave will reach some 12 meters high and the wind speed will be some 32 meter/second (Beaufort Scale, 2008). As a consequence, the consignment in the container in the vessel hold may collapse, hit against each other and hit against the container wall. Inundation is the other cause that normally occurs at the port area. Continuous heavy rain results in the flooding of its vicinity. Though each container has a rubber gasket at its door, it can only protect the cargo inside from rain but not flooding. As a result of water contact, several kinds of cargo sustain damage: steel coil/steel bar will be rusted, powder cargo will be caked and

moulded, electrical cargo will be malfunctioned. Another reason is called “Sweat and Condensation within the Container”. According to Lower-Hill (1996, pp.23-26, 42-46), condensation will happen when there is an atmospheric change. When the interior of the container receives excessive moisture from water leakage, and then the container is placed in a open yard for a while during the daytime, the moisture at the container floor or at some packages will condense and remain throughout at the inner walls and roof. After that, such water will drop onto all packages contained inside and the cargo will be damaged.

The most important cause is damage by human act. At the discharging port, damage can be caused by port workers and stevedore or dock workers. Forklift truck drivers at the port only cares for his quantity of work but not the quality of work. Some kinds of cargo are fragile and should be handled with care. Due to his rough handling, some cargo may drop, collapse and break without being witnessed by the cargo owner. The consignees may see that their consignment is torn and broken at the bottom of package. It means that the package may have been pierced with a forklift’s prongs. Sometimes he also fails to notice what side should be lifted as the cargo inside the package may not be balanced. Therefore, if he lifts the package at the wrong position, the package will break and drop onto the ground. Vanplantinga (1984) stated that a stevedore is another person who pays less care to his work and tends to damage the cargo as well. If we ask him to pay more attention, his work will be slowed down. However, any claim for stevedoring handling damage is quite impossible because we normally don’t have enough supporting evidence. Moreover, a stevedore usually greets us with “Catch me if you can” (p.16) Pilferage at the port warehouse is another human act. For the meaning of pilferage, Ellen (1993) defines, “This term is usually taken to mean petty theft which is, in itself, a relative term; what is a considerable loss to some may be tolerable or petty to others” (p.11). However, it is scarcely to be found at present as pilferage is only limited to valuable cargo with the handle size such as scientific instrument, gold bars, digital cameras, watches, DVD players, CKD parts, etc. These kinds of cargo are generally sent via aircraft instead of ship. Nevertheless, if they are imported by vessel, they should be kept at the valuable cargo warehouse. According to the port’s regulation, discharging work for the valuable cargo would be allowed only during the daytime. (ประไพศรี อินทรองพล, ม.ป.ป., น. 84)

In light of the above, transportation equipment, natural disaster and human actions are the major causes that account for damage to cargo during marine transportation. Though the natural disaster is quite impossible for loss prevention, the other two causes definitely have their clues. For the transportation equipment, the carrying container should be inspected prior to use. Packing and securing should be sufficient enough to protect the cargo in transit. The proper packing and securing would also help mitigate any damage from natural disaster. For human actions, the sign on the package would be a guideline for the operator and help him improve his handling of goods as well. Therefore, this study will focus on the damage from the equipment, human action as well as responsibility of each party in order to improve the quality of imported cargo work in Thailand.

2.3 INTERVIEW TO DETERMINE CAUSES OF DAMAGE

Most studies in the field of marine transportation only focus on the attitude of the import and export companies towards the carrier but no study regarding the cause of damage of marine transportation has ever been done in Thailand. Therefore, Mr. Chinda Kingarounchai, the manager of Thai Adjusting Co., Ltd., (personal communication, October 18, 2007) was chosen to be the interviewee for the situation of damage in Thailand's import. His company is the local claims settling agent for 18 leading marine insurance companies located in Japan, China, Taiwan, Korea, etc.

From his experience of more than 15 years in this field, Mr. Chinda suggested that damage to the cargo can be caused by both transportation equipment and human action. But if we ask the consignees, they may not want to find out the cause of damage to their cargo as they only claim against the insurance company. However, apart from the main causes of damage, there are some additional factors that should be take into consideration such as period of shipment, weather, container type and packing manner. Long periods of shipment tend to cause more damage to the cargo. If the steel coil or wire rod were placed at port's outdoor area for more than 10 days, the tendency of becoming wet from rain will increase. Meanwhile, CFS container, which is devanned at port, tends to cause more damage than CY container, which is devanned at the consignee's factory. Quality of devanning operation done by port's labour is considered to be lower than the cargo owner's staff. Packing manner is another factor. Cargo in

bare has high risk of damage, followed by cargo in bag, in cardboard carton and in can. According to this packing manner, the consignment from Japan has high quality of packing as Japanese companies have more experience in exporting cargo throughout the world. Some other industrial countries like Taiwan and Korea are ranked second in terms of safety packing manner. When he took recovery against the party at fault, only 5-10% of the carriers accepted and agreed to compensate. The majority in this portion is airline, whereas the shipping line has less responsibility on this. So, the claims against shipping lines are always brought into court and he has to advise the consignee to collect all the relevant documentary evidences.

2.4 RELEVANT RESEARCH

Apart from Mr. Chinda's information, some previous studies agreed that improper equipment such as containers will help reduce the damage but workers at ports and shipping lines tend to cause damage to the cargo. However, it is rather difficult for the consignee to claim against them.

Regarding the attitude of the importer, the study of Niyada Chunhawong (นิยดา ชุนหวงศ์, 2529, น. 109) showed that 95% of respondents believed that containers could help reduce damage. However, though the cargo was imported via CY container, the consignees still chose to devan their cargo at port at 62.5% due to lower costs. Only 25% of the respondents devanned the container at their warehouses (น. 25). From lower costs, the consignees who open the container at port have to bare the risk of damage and stealing or pilferage. 53.14% of respondents wanted the port to be responsible for the missing and damaged cargo (น. 48). Meanwhile, for the shipping line, this study suggested that they always deny the claim on CY containers as the carriers never know the exact condition of cargo inside (น. 90).

The other 2 studies also support Niyada Chunhawong's study. Professor Anya Kunthavit, (อัญญา จันทวิทย์, 2530) said that 26.4% of import export companies want the shipping line to solve the problem of cargo damage (น. 91). Meanwhile, if the consignee claims against the shipping line, it will be delayed with many procedures and documents required (จิรนนท์ อังกุทธิพงษ์, 2550, น. 120).

Although these research studies suggest some attitude of the consignee towards the carrier and port, they have no details in the factors causing the damage at each stage of marine transportation namely shipper, shipping line, port, inland forwarder and the consignee. Therefore, the purpose of this study is to study more on the above factors and their relation as well as attitude to the consignee towards each party that is involved.