



THE STUDY OF THE FACTORS INFLUENCING THE
SELECTION BETWEEN FREIGHT FORWARDERS AND
OCEAN LINERS

By
CHANTHIP SMITANANDA

A Final Report of the Six-Credit Course
SCM 2202 Graduate Project

Submitted in Partial Fulfillment of the Requirements for the Degree of
MASTER OF SCIENCE IN SUPPLY CHAIN MANAGEMENT

Martin de Tours School of Management
Assumption University
Bangkok, Thailand

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Examination Committee:

1. Dr. Ismail Ali Siad (Chair)
2. Dr. Piyawan Puttibarncharoensri (Member)
3. Asst. Prof. Dr. Nucharee Supatn (Advisor) ✓

Approved for Graduation on: September 14, 2012

Martin de Tours School of Management
Assumption University
Bangkok, Thailand

September 2012

Assumption University
Martin de Tours School of Management and Economics
Master of Science in Supply Chain Management

Declaration of Authorship Form

I, Chanthip Smitananda

declare that this thesis/project and the work presented in it are my own and has been generated by me as the result of my own original research.

The Study of the Factors Influencing the Selection Between Freight Forwarders and Ocean Liners

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ID: 531-9561

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I confirm that this thesis/project has been carried out under my supervision and it represents the original work of the candidate.

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Chanthip Smitananda
Assumption University
September 2012

ABSTRACT

Sea freight transportation is popularly used for importers and exporters to ship goods from country to country due to many benefits such as low transportation cost and high flexibility. It also allows the customers to arrange shipment with large volumes. There are two majors logistics service providers who offer sea freight transport service which are freight forwarders and ocean liners. However, they can provide the different advantages and disadvantages for the customers due to capability, capacity and constraints of each company.

This research aims at testing the relationship between perception of the customers on freight rate, responsiveness and assurance, reliability and reputation, resource availability, information technology and relationship quality and their intention to select freight forwarders and ocean liners. The target populations of this research are shippers who currently use both freight forwarders and ocean liners. The questionnaire survey was designed to gather the data from target people.

The results show significant relationship between responsiveness and assurance, reliability and reputation, resource availability and information technology and customer's intention to select freight forwarders while freight rate, and responsiveness and assurance are significantly related to customer intention to select ocean liners. Moreover, the freight rate, responsiveness and assurance, resource availability and relationship quality of the freight forwarders are perceived as higher than that of ocean liners while the reliability and reputation, and information technology of the freight forwarders are perceived as lower. Finally, the results indicated that customers selected the service from ocean liners rather than the freight forwarders.

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Signed

(Asst Prof Dr. June Bernadette D'Souza)

Contact Number / Email address dbjune2006@yahoo.com

Date:

30th November/2012

CHAPTER I

GENERALITIES OF THE STUDY

1.1 Background of the Study

In today's dynamic world, all business units around the world mostly emphasize on increasing revenues. In addition, the high competition in the current market affects many companies. Therefore, they have to understand factors that influence customer selection and develop business strategies so as to expand the business and serve customers' needs and wants. This is the role that will help the company to keep a standing in the market, and also increase more market share, more customers and more tendencies for future growth in the business world. Thus, the company needs to expand business from domestic trade to foreign trade by seeking good business partners to enter the global market which is necessary. Moreover, the management of transportation of essential parts for production such as materials, machine and finished goods (or freights) to customer worldwide also plays an important role. Many companies tend to outsource their transportation to logistics service providers than manage in house. This could be benefit so that the companies focus on their core business activities, reduce the operation cost, and earn more profitability.

However, there are various transportation modes that the customer can select to transport goods or products across the country. It can be arranged by air, road, sea, or rail. The exporters and importers mostly compare advantages and disadvantages of each transportation mode before making a decision. Then, they will select logistics service providers that are very close to their requirements. According to the international freight transport, the international maritime transportation is commonly selected. This is particularly true for intercontinental containerized cargoes and for liquid and dry bulk cargoes, such as oil and grains (Corbett & Winebrake, 2008).

The United Nations Conference on Trade and Development (UNCTAD), indicated in the *Review of Maritime Transport (2008)*, that more than 80 per cent of international trade in goods is carried by sea, and an even higher percentage of developing-country trade is carried by vessels. In this regard, the sea freight transportation business provides more competitive advantages for shippers to export goods across the country. The benefits are about high flexibility, allowing large volumes to be loaded, competitive price and short transit time when compared to another transportation mode.

In Thailand, the statistics of Thailand Foreign Trade record since year 2007 until 2009 indicates that the trend of both export and import shipments were exported by sea freight transportation as shown in Table 1.1 below.

Table 1.1: Foreign Trade Exports in 2007-2009 Categorized by Transportation Modes (Units : Tonnes'000)

MODE/YEAR	2007	2008	2009
AIR	462	418	397
LAND	7751	8372	9122
RAIL	685	296	164
SEA	92812	93907	91717
MAIL & OTHERS	1	2	0

Source: Department of Customs, Ministry of Transport (2009)

1.2 Statement of the Problem

In sea freight business, there are two major services offered; "Full Container Load" (FCL) and "Less than Container Load" (LCL) service to customers which includes freight forwarders and ocean liners. Both of them can be called as "Third-party logistics provider. The FCL service has only one shipper per container and consigned shipment to one consignee. The LCL service has many shippers and consolidated shipments within one container. This is the difference advantage that shippers use to consider when they select the type of transportation for their shipments.

Berglund (1999) defined Third-party logistics provider (TPL) as activities carried out by a logistics service provider on behalf of a shipper and consist of at least management and execution of transportation and warehousing. Stefansson (2006) concluded that the roles of third-party service providers varies according to the level of outsourcing, from only transportation services to complete integrated-logistics value-added services and global management of the customers' logistical setups.

Regarding the definition and the role of TPL, it can be explained that the shipper has changed the way to manage logistics activities from in-house to outsource services by using TPL. It can be a benefit to them for cost reduction on assets. As such, TPLs who provide sea freight services can be categorized into two major service providers including freight forwarders and ocean liners.

Ocean liners are ships designed for the task, provide container ships equipped with cranes and other mechanisms to load and unload containers of the vessel and also provide service by carrying shipments from origin seaport to another along which offer regular schedules on established maritime routes. Freight forwarders is a company that acts as middle-men between business owners and ocean liners by arranging shipments on behalf of exporters and importers, reserving space via common carriers, preparing and processing the documentation, and performing related logistics activities for their customer. In contrast, ocean liners are the owners of vessels and containers, and mainly provide transportation service such as inbound and outbound transportation, door-to-door transportation service and contract delivery, and also administrative service such as documentation handling, transports scheduling. Ocean liners also handle in-house operating systems such as the cargo manifest system and containerized delivery system.

Ocean liners seem to have more resources and own assets such as the vessels and container operating systems. Thus, they have greater capability to provide more competitive rates and allocate space to customers. In contrast, freight forwarders have greater flexibility because of various products that can provide a full range of logistics activities and higher service level to customers than ocean liner cannot do. In

addition, Stewart and Inaba (2003) suggested that the large company that has big volume is mostly in direct contact to carriers because they can get more competitive rates than small and medium-sized company. The proportion of small to very large company size which negotiates directly with carriers is shown in Table 1.2.

Table 1.2: Fraction of Shippers Negotiating Directly with Carriers

Category	Fraction
Small	21%
Medium-sized	48%
Large	71%
Very Large	100%

Source: Stewart & Inaba (2003)

Meanwhile, the large firms have much power to negotiate and get discount rates from carriers while some importers and exporters who have no deal with a common carrier directly, can rely on freight forwarders so as to get more competitive freight rate than tariff freight rate which offered by ocean liners. However, sea freight services quality of freight forwarders and ocean liners maybe perceived differently and can affect customer intention to select the company who offers greater services and satisfies their need finally.

The challenge, in sea freight business, continuous improvement on service quality of logistics providers is very importance to gain more competitive advantages. The company should provide high service levels so as to approach, attract and retain customers to be loyal to its company. As such, the research question is "**What are the key factors to select freight forwarders or ocean liners?**" is emphasized in this study.

1.3 Research Objectives

The objectives of this research are as follows:

1. To identify the relationship between customers' intention to select freight forwarders and ocean liners in FCL service and its influencing factors.
2. To compare sea freight service offered by freight forwarders and ocean liners in FCL service.
3. To identify the factors that provides largest impact on customer selection.

1.4 Scope of the Research

This research focuses on the shippers in Bangkok and suburbs of Bangkok area. The data will be collected using the questionnaire survey and distributed to the firms who perform exporting tasks. The data will be collected from the authorized decision making people in the logistics section of the targeted firms. The sample group of its target for this research will be 100 companies. The researcher has randomly selected those targets and designed to collect the data from direct shippers who currently use sea freight service from both freight forwarders and ocean liners. Due to uncountable customer's listed in the target, the researcher has used past working experience when dealing with customers and also interviewed customers to ensure that they have direct experience with both freight forwarders and ocean liners.

1.5 Significance of the Research

This research will be conducted using survey on sea freight services provided by freight forwarders and ocean liners as well as the related factors that influence customers to select freight forwarders or ocean liners. The importance of this research is to identify what the typical needs of customers from freight forwarders in sea freight services. It also benefits freight forwarders to learn and understand how to compete with ocean liners. Moreover, the benefits of this research are for the management level of both freight forwarders and ocean liners to enhance and improve their service operation in order to retain and build up good relationship with the existing customers and to remain in a good position in the market and expand business to the new market in the near future.

1.6 Limitations of the Research

This research is limited to the number of shippers who require sea freight service and arrange shipment by Full Container Load (FCL) services only. The data is collected from direct shippers who obtain sea freight services from both freight forwarders and ocean liners surrounding Bangkok and suburbs of Bangkok areas for that particular time. In addition, this research uses convenient selection manner when defining the target group because of unknown customer lists. The non-probability sampling technique is used. There is no random selection which resulting in some discrepancies when generalizing results. The results are not be the representative of the entire business units who use sea freight services located nationwide.

1.7 Definition of Terms

Freight Forwarders

The agent who acts as a carrier agent by arranging shipment and processing all related administrative tasks (Ozsomer, Mitri & Cavusgil, 1993).

Freight Rate

The rate as agreed between a shipper and a carrier owner of freights transportation from the origin point to final destination (Slater, 1993).

Full Container Load (FCL)

A term of moving cargoes by loading into the standard container which is often measured in 20 foot container and 40 foot container (Slijper, 1993).

Information Technology

It is related with information technology that logistics service providers could provide to the customer to have convenience and comfort while receiving the data such as shipment's tracing and tracking,... etc. (Kannan, 2010).

Ocean Liner	A transportation company that provides transportation service by delivering international cargoes from port to port across countries. (Semejin & Vallenga, 1995).
Relationship Quality	Refers to the level of relationship between the shipper and logistics service provider including the shipper's attitude toward logistics service provider (Kent & Parker, 1999).
Reliability and Reputation	It is related to the company's reputation for reliability in the market and also about the overall perception of customers about the service organization (Thai, 2007).
Resource availability	It is about equipment and facilities availability, equipment and facilities condition and physical infrastructure (Thai, 2007).
Responsiveness and Assurance	Refers to the responsibility of staff in willing to serve the customer, understand customer's need and try to reach customer's requirement whenever they need (Murphy et al., 1993).
Third-party logistics provider	It is often seen as providers of the integrated supply chain, which uses many value-added services to its customer including freight forwarders, ocean liners and other companies who provide transportation services (Aghazadeh, 2003).

CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH FRAMEWORK

There are two sections in this chapter. The first part is concerned with the general concepts and definitions of freight forwarders and ocean liners. The second part is about the decision influential factors to select sea freight service providers.

2.1 Sea Freight Service Providers

Sea freight transportation is the mode of transporting goods by container on the ship across the country. In oversea markets, the exporter is concerned that products should reach their customers in a perfect condition as much as possible. The container capacity can allow the exporter to have more control in the quality of product among delivery until the customer receives cargoes at the destination point.

Full Container Load service (FCL) is the kind of transportation mode that allows the exporter to deliver cargoes to their customer and enjoy economy of scales of container capacity to load cargoes by large volume with competitive cost. Nevertheless, there are various types of containers that the exporters use to load cargoes but the most widely used be container is the Dry-van containers (non-insulated) and Reefer containers (with integral temperature control) and insulated containers. The selection criteria of using containers will be employed depending on climatic conditions during the voyage (Slijper, 1993). There are two majors logistics service providers who can provide FCL service which are freight forwarders and ocean liners. Ocean liner is the ship owner who provides allocation space, equipments, facilities and vessel routing services to customers who need to transport goods by sea. Meanwhile, freight forwarder is the company who performs as the middle man in connection among ocean liner and shippers by providing logistics service to its customers. The service

differentials among them are the critical option for exporters when they need to decide which best logistics partner closely relates to their requirements.

2.1.1 Definition and Role of Freight Forwarders

Some authors indicated that freight forwarders mostly deal with export shipments, while others stated that freight forwarders can provide various logistics activities and arrange shipment both export and import site. Anyhow, the description of freight forwarders is defined by various sources appearing described in Table 2.1.

Table 2.1: Definition of Freight Forwarder

Authors	Definition of freight forwarder
Barrar & Davies (1985)	The freight forwarder acts as an expert for export leaving company in the role of production and marketing by arranging documentation and transportation.
Terpstra (1987)	The freight forwarder is a specialist in both transportation and documentation for international shipments.
Cundiff & Hilger (1988)	The freight forwarder is a special agent available to exporters and importers.
Coyle, Barth & Langley (1988)	The freight forwarder consolidates small shipments into more economical sizes and takes care of the routine actions required for shipments.
Jonhson & Wood (1990)	The freight forwarder usually specializes in handling either vessel shipments or air.
Muller (1990)	The freight forwarder provides an array of services that help shipper in saving time and money.
Anderson (1993)	The freight forwarder provides a vast number of services that help shippers save time, money, and keep the exporting process running smoothly.
Cateora & Keaveny (1997)	The freight forwarder is a specialist in logistics function for export and import shipments.

Source: Adapted from Murphy, Daley and Dalenberg (1993)

The role of the freight forwarder has further expanded over decade. Ozsomer, Mitri and Cavusgil (1993) stated that a freight forwarder acts as a carrier agent who arranges the shipment and process documentation, provides marine insurance and licenses, does customs brokerage, and also arranges shipment by ocean, air, and/or surface transportation. According to Daley and Murphy (1995) classified the tasks of freight forwarder into five duties which includes paying freight charges, tracing and expediting shipments, making routing recommendation, issuing export declarations, and preparing certificates of origin. Slater (2007) described the job description of freight forwarding agent as a person who handles the administrative details, selection and organization of international physical distribution operations and provision of the correct documentations.

Furthermore, Murphy et al. (1993) defined the sea freight transport service that is provided by freight forwarder according to the following details.

- 1) Quoting air/ocean freight rates.
- 2) Booking allocation space with ocean liner and obtaining vessel space for shippers.
- 3) Preparing commercial invoices and packing list.
- 4) Obtaining export licenses.
- 5) Issuing export declarations for the shipper.
- 6) Preparing certificates of origin and other permit export licenses from shipper's assignment.
- 7) Obtaining and preparing consular invoices.
- 8) Compiling air waybills and ocean bills of lading.
- 9) Obtaining cargo insurance or guarantee documents.
- 10) Paying freight charges.
- 11) Obtaining cargo receipts, dock receipts and stuffing reports.
- 12) Presenting documents to buyer/seller's bank in term of L/C shipment.
- 13) Obtaining air port/sea port warehouse space.
- 14) Tracing, tracking and expediting shipments.
- 15) Collecting and submitting money for shipments.
- 16) Advising shipper as to selection of trade terms.

- 17) Acting as general consultants on export matters for the shipper.
- 18) Providing for transport from exporter to the final destination (door-to-door service).
- 19) Legal counseling.
- 20) Packaging procedures (carton, loose carton box, pallet, wooden case, etc.).
- 21) Shipment consolidation both FCL (Delivery term is CFS/CY) and LCL shipments.
- 22) Making routing recommendations and offering multimodal transport.
- 23) Break bulk cargo.

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2.1.2 Definition and Role of Ocean Liners

There are many definitions of ocean liners according to authors like Semejin and Vellenga (1995) defined ocean carrier as the transportation company for delivering international cargoes which depend on ocean-going vessels, available for Door-to-Door service through their own carrier vessel or connecting to other modes and operating in-house logistics services. Haralambides (2007) stated that historically, the shipping industry is categorized into two major sectors. First is the bulk shipping sector. In terms of marketing, it mainly provides transport services for moving raw materials from place to place. Secondly is the liner shipping sector which is involved with transporting of semi-products or finished goods across the country.

Furthermore, the logistics service that is provided by each ocean liner is described according to differences. The difference depends on establishment of company policy. Thus, the information about the role of ocean liner was reviewed and gathered from the website of the companies who have good explanation of company profile and are well-known in ocean liner business. The sample company websites are www.evergreen-line.com, www.hapag-lloyd.co.th and www.mearskline.com. The provision of service can be explained according to the following details.

- 1) Ocean tariff rates, quotations and other related surcharges and fees.
- 2) The provision of service is covered general cargo, special cargo, dangerous cargo, refrigerated service.

- 3) Equipment availability (Dry containers have several sizes. For example; 20'ST, 40'ST, 40'HQ, 45'feet), Reefer container, special equipment i. e. Flat Rack container, Open-Top container both In-gauge and Out-of-gauge) and container fleet management.
- 4) Time-table sailing schedule and routing network.
- 5) Cargo tracking and tracing.
- 6) Customer services such as shipment statistics, account statements, Electronic Data Interchange (EDI), Importer Security Filling (ISF) and Automated Manifest System (AMS), and cargo manifest information updates.
- 7) Documentation involved with transport documents i.e. bill of lading, container stuffing report, letter of indemnity, cargo manifest reports.
- 8) E-business integration solution such as E-Booking, Internet B/L, E-commerce and other online tools.
- 9) Notification of news and events on web-site or announced by public mail and Press Released.
- 10) Worldwide service networks (Local & Oversea contacts).
- 11) Supply chain solutions and multimodal services (railways, river and road freight).

2.2 Factors Influencing Customer Selection on the Sea Freight Service Providers

Many authors have defined the variable that relates to a shippers' intention to outsource logistics service providers to support them for transporting cargo to consignee. The discussion on freight transport choice is published by many researchers. Kent and Parker (1999) indicated that there are many factors that influence customer selection which include reliability, equipment availability, service frequency, rate changes, operating personal, transit time, financial stability, loss and damage, expediting, tracing, service changes, rates, scheduling flexibility, carrier salesmanship, line-haul services, special equipment, pickup and delivery, and claims. Kannan (2010) concluded that seven important factors are about rate, customer service, operations, reputation, infrastructure, scheduling, and IT orientation and communication. McGinnis (1993) examined seven factors that influence shippers to select sea freight service providers which are about speed and reliability, freight rates,

loss and damages, company policy and customer influence, inventories, market competitiveness and external market influences. Saleh and Das (1993) researched on transport service choice and found that two major related important performance characteristics from shipper's attitude are about delivery time and transit time reliability. Pedersen and Gray (1998) studied the criteria that shippers will employ when they select transportation mode include timing factors, price factors, security/control factors and service factors. Whyte (1993) concluded that price and ability to provide good services is the major factor in determining hauler selection. Anyhow, the influential factors of customer selection on sea freight service providers can be summarized as follows and are shown in Table 2.2.

Table 2.2: Factors Influencing Customer Selection toward Sea Freight Service

Providers	
Authors	Factors
Kannan (2010)	<ol style="list-style-type: none"> 1. Rate 2. Customer service 3. Operations 4. Reputation 5. Infrastructure 6. Scheduling 7. IT orientation and communication
Kent & Parker (1999)	<ol style="list-style-type: none"> 1. Reliability 2. Equipment availability 3. Service frequency 4. Rate changes 5. Operating personnel 6. Transit time 7. Financial stability 8. Loss and damage 9. Expediting 10. Tracing

Table 2.3: Factors Influencing Customer Selection toward Sea Freight Service Providers

(Continued)

Authors	Factors
	<ul style="list-style-type: none"> 11. Service Changes 12. Rates 13. Scheduling flexibility 14. Carrier salesmanship 15. Line-haul services 16. Special equipment 17. Pickup and Delivery 18. Claims
McGinnis (1993)	<ul style="list-style-type: none"> 1. Speed and Reliability. 2. Freight Rates. 3. Loss and Damages. 4. Company Policy and Customer Influence. 5. Inventories. 6. Market competitiveness 7. External Market Influences
Pedersen & Gray (1998)	<ul style="list-style-type: none"> 1. Timing 2. Price. 3. Security and Control 4. Service
Saleh & Das (1993)	<ul style="list-style-type: none"> 1. Delivery Time. 2. Transit Time.
Whyte (1993)	<ul style="list-style-type: none"> 1. Price. 2. Service.

According to Table 2.2 and 2.3, the researcher has summarized and decided to use freight rates, responsiveness, reliability and reputation, resource availability, information technology and relationship quality as the key factors that influence customer intention to select sea freight services that are provided from either freight

forwarders and ocean liners. These factors will be applied for this research. The details of each factor are discussed in following part.

2.2.1 Freight Rate

The cost of transportation is the critical part in terms of marketing of a business. It is essential for the logistics manager to have more focus on distribution cost and find the way to minimize transportation cost which can benefit the company in maximizing profit on international trade business. Slater (1993) stated that freight rate can vary depending on the commodity and weight of product, the destination and each transportation mode differently. In addition, freight rates effects the cost of the product sold and has to be considered when calculating the total cost of the product in order to fix the selling price for customer. Juntunen, Grant, and Juga, (2010) commented that the shippers will consider the performance of third-party logistics providers who can provide low cost and good service which may change TPLs in term of cost reduction as well. In brief, this is positive relation between good freight rate and shipper's decision in selecting service provided by each TPL.

2.2.2 Responsiveness and Assurance

Shah and Sharma (2012) stated that the responsiveness of third-party logistics service provider to have quick response when and where customer needs depends on minimum time for orders, the ability to have solutions for customers and the flexibility to respond to fluctuating demands from customers. Stank, Daugherty, and Ellinger (1996) explained the responsiveness is about the capability of the firm to have good performance in operating and applying an essential thing to meet with uncertainty of supply and demand. An achievement of responsiveness in the view of customer is that TPL must have quick response, provide an accurate data and appropriate information and must be available to corporate with unpredicted and unforeseen problem situations. In summary, the improvement of responsiveness can effect customer's perception of TPL's performance.

2.2.3 Reliability and Reputation

Generally, a large TPL has high reputation will obtain higher competitive advantages than medium to small sized companies. The image of the logistics provider will be favorable and easy for them to expand business among competitors. Qureshi, Kumar, and Kumar (2008) emphasized that a brand name of TPL can effect shipper's decision. It improves long term relationship and long run business between the shipper and TPL. Chowdhary and Prakash (2007) stated that reliability is included as the six dimension of service quality besides tangibility, responsiveness, assurance, empathy and fees. Davis, Golobic and Marquardt (2009) indicated that a customer uses a brand as a significant criteria to identify service level of the logistics service providers. Moreover, they suggested that logistics service providers should develop the ability to offer the effective and efficiency service in effort to meet their customer's requirements, increase brand awareness and strengthen brand image. It is more important for logistics service providers to have more focus on company's brand in order to gain higher profit as well.

2.2.4 Resource Availability

According to Thai (2007), the resources dimension in the part of perceived service quality influences the customer to select the logistics service provider in sea freight transport which includes equipment and facilities availability, equipment and facilities condition, financial stability, shipment tracing capability and physical infrastructures. It's related to the customer when they evaluate quality of service provided by their contract logistics provider. It's probably that insufficient equipment, unavailable facility and low product's quality that affects customer's selection.

2.2.5 Information Technology

Lin (2007) defined Information Technology (IT) as helping tools in promoting the communication between companies more efficiently. It can help the company to improve productivity, flexibility and competitiveness. Moreover, Lin suggested that

the transportation information systems are more useful for managing and controlling transportation activities. The examples of IT used in logistics activities such as Electronic Data Interchange (EDI), internet and e-paperless systems vary and are used in import and export declaration process. Casal, Wunnik, Sancho, Burgelman and Desruelle (2005) indicated that the improvement of Information and Communication Technologies (ICTs) has positive effects which help the company to minimize cost, have faster and more flexible transportation, reduce waste time and increase cycle time more efficiently. Evangelista and Sweeney (2006) concluded that the potential benefits in adoption of ICT tools will increase profitability and competitive advantages even in small or large TPLs in order to help, support and satisfy customers' needs.

2.2.6 Relationship Quality

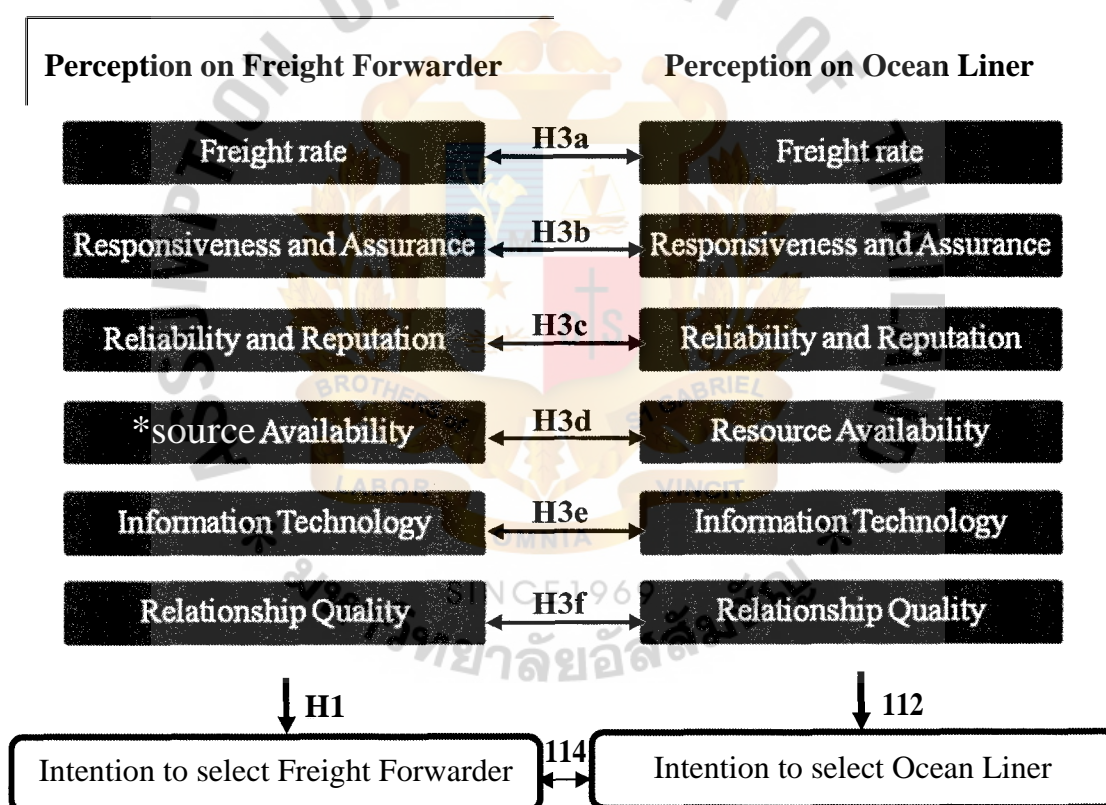
Bolumole (2001) suggested that the management personalities should be involved with the relationship between the firm and third-party logistics service providers (TPLs) in selecting logistics business partners to support logistics activities to the firm. In addition, TPLs realized that the failure to meet customer's requirement impact to the loss of relationship. Bask (2001) has reviewed the work of various authors and summarized that the establishment of closer, efficient and long term relationship can be benefits in term of reduction in the number of logistics service providers used by the customer or fewer number of carriers used. Furthermore, the researchers have experience in dealing with many customers. The customer suggested that they do not need to change current logistics partners to another new company because of the long relationship between them. In addition, they believed their current TPLs because they can provide service which is closed to their requirements since they have served them since a long time and deeply understand what they expect.

2.3 Research Framework

The above review of literature indicated that there are many influential factors that affect customers' intention to select services either from freight forwarders or ocean

liners. The research framework of this study is constructed based on the conceptual framework adapted from Kent and Parker (1999), Kannan (2010) and McGinis (1993) which highlight factors influencing customer selection toward freight forwarders or ocean liners. Initially, the study attempts to compare the difference in services providing from both freight forwarders and ocean liners in terms of customer's view and analyze the important of decision criteria that influence the customer to select sea freight service providers who can offer best products and services.

Figures 2.1: Conceptual Framework



The two arrowhead lines express the proposed discrepancies of the independent variables and dependent variables of freight forwarders and ocean liners that will be constructed in this research. The arrow line refers to the flow of a perceived service of the customers toward freight forwarders and ocean liners at the same time of making decision.

2.4 Research Hypotheses

The dependent variable is the intention to select freight forwarders and ocean liners by customers which contain two main hypotheses and six independent variables. The first two hypotheses explain the relationship between the perception of factors and customer intention to select freight forwarders and ocean liners while the third and fourth hypotheses state the differences in service provided by freight forwarders and ocean liners and customers' intention to select each type of sea freight service provider.

The details of the hypotheses can be stated as below:

Hypothesis 1: Perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality influence the customers' intention to select FCL service provided by freight forwarders.

Hypothesis 2: Perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality influence the customers' intention to select FCL service provided by ocean liners.

Hypothesis 3: Perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality provided by freight forwarders and ocean liners are different.

Hypothesis 4: Customers' intention to select FCL service from freight forwarders and ocean liners is different.

2.5 Summary

Freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality are mentioned by previous studies as the factors that influence the customer to select FCL service which are provided by freight forwarders and ocean liners. As such, all of them are emphasized in this study. The research framework is developed accordingly while four hypotheses stating the relationship between test factors and customer intention to select the service providers as well as the difference of customer perception of each factor are proposed.



CHAPTER III

RESEARCH METHODOLOGY

This chapter explains the methodology used in this research study. The research design is firstly discussed. Then, questionnaire development, target population and sampling method, data collection plan, pre-testing and pre-test results and also data analysis plan will be described. The detail of each stage is presented in parts which is follows.

3.1 Research Design

This research used "a questionnaire survey" as major method. The subject is to determine the customers' selection towards sea freight transport service providers and study the factors that influence the customer to select between freight forwarders and ocean liners. Customer's Intention to select freight forwarders or ocean liners is the dependent variable. Freight rate, responsiveness and assurance, reliability and reputation, resource availability, information technology and relationship quality are the six independent variables.

3.2 Target Population and Sampling Method

The target population is mainly about the customers who currently use sea freight transport service which is provided by both freight forwarders and ocean liners. These are located around Bangkok and suburb of Bangkok area. Samples are selected by the snowball technique which is a non-probability sampling method, since there are unavailable customer list and total population is uncountable or unknown.

To determine the sample size of this study, 95% confidence level with the accepted error of 10 percent are applied in order to get the sufficient survey results for

collecting the questionnaire. The following formula will be used to calculate the sampling size as shown below:

$$n = \frac{Z^2 pq}{E^2}$$

Where n = Sample size

Z = z-score at the selected confidence level of 95%

p = proportion of success with estimated prevalence at 0.5

q = proportion of failure with estimate prevalence at 0.5

e = Error limit set to 10%

Hence
$$n = \frac{(1.96^2) * 0.5 * 0.5}{(0.1)^2} = 97 \approx 100$$

Therefore, the sample size of the study is 100 shippers drawn from direct shippers who currently use sea freight service with freight forwarders and ocean liners.

3.3 Questionnaire Development

This research study used a questionnaire survey as a research tool which was created based on the literature review and conceptual framework. The questionnaire is constructed into three parts.

Part 1: Customer's attitude towards freight forwarders and ocean liners.

This part is designed to measure customer's perception on sea freight transport service provided by both freight forwarders and ocean liners that are used at present time. The measurement of this part will be separated into six factors based on factors that effect customer's intention. There are freight rate, responsiveness and assurance, reliability and reputation, resource availability, information technology and relationship quality. Furthermore, this part requires the respondent to range the level of their attitude according to four-point scales from 1 (Strongly agree) to 4 (Strongly disagree). The measurement of each independent item is presented on Table 3.1.

Table 3.1: Factors of Customer Intention in Sea Freight Transport

Constructs	Measurement Items	Modified from
Freight rate	<ol style="list-style-type: none"> 1. Freight rate has the best competitive. 2. Freight rate can be negotiated. 3. Freight rate is attractive. 4. You feel satisfied with the freight rate offered by the logistics service providers. 	Kannan (2010)
Responsiveness and Assurance	<ol style="list-style-type: none"> 1. The staff makes an effort to understand your requirements. 2. The staff always responds to your requirements within the time requests. 3. The staff has willingness to serve and help you to solve problems within the agreed time. 4. The staff is able to handle your complaints and provide an appropriate solution for your problem. 5. The staff always has good suggestions for you when needed. 	Murphy et al. (1993)
Reliability and Reputation	<ol style="list-style-type: none"> 1. You trust in service provided by the logistics service providers. 2. You believe that logistics service providers can offer service professionally. 3. Logistics service providers is a reliable company 4. Logistics service providers have a good reputation in sea freight transport service. 	Kent & Parker, (1999); Kannan (2010)
Resource Availability	<ol style="list-style-type: none"> 1. Logistics service providers have sufficient space and always available to serve when needed. 2. Equipment and facilities are sufficiently available. 3. Logistics service providers can serve more alternative choices. 	Kent & Parker, (1999); Kannan (2010)

Table 3.2: Factors of Customer Intention in Sea Freight Transport

(Continued)

Constructs	Measurement Items	Modified from
Information Technology	1. Logistics service providers have sufficient information technology to support your requirements. 2. Internet tools are available to support your requirements. 3. It is convenient for you to update the status of shipment on the website created by the logistics service providers. 4. Shipment tracing & tracking capability is sufficient.	Kent & Parker (1999); Kannan (2010)
Relationship Quality	1. You are satisfied with the overall service provided by staffs of the company. 2. You have positive experiences and good impression with logistics service providers. 3. Due to long term relationship between you and logistics service providers in effect that you do not need to change to another logistics service providers.	Kannan (2010)

Part 2: Customer's behavior in selecting sea freight service providers.

This part focuses on customer's selection of freight forwarders and ocean liners and measures an individual score by using a five-point scales ranging from 1 (Definitely yes) to 5 (Definitely no). The measurement of each dependent variable is presented in Table 3.3.

Table 3.3: Customer Intention to Select Sea Freight Service Providers

Constructs	Measurement Items	Modified from
Intention to select freight forwarders	1. You usually consider using service provided by freight forwarders as the first priority. 2. You intend to deal with freight forwarders only. 3. You will highly recommend freight forwarders service to others.	Anderson (1993); Murphy et al. (1993)
Intention to select ocean liners	1. You usually consider using service provided by ocean liners as the first priority. 2. You intend to deal with ocean liners only. 3. You will highly recommend ocean liners service to others.	Haralambides (2007); Kannan (2010); Kent & Parker (1999)

Part 3: Company Profiles.

This part is designed to gather information about the company profile such as the characteristics of the company, and to study the behavioral reactions of the respondents towards logistics service providers such as frequency of the service used, period of time to the relationship exists among them and number of logistics partners that they currently associate with. In addition, the personal data of the respondents such as the position level is also needed in this part.

3.4 Pre-Testing and Pretest Results

The pre-test is used as a trial basis in a small-scale sample size of this particular research in order to test reliability of the questionnaire and identify for any problems that might occur with wrong information and error in the results. The questionnaire should be corrected and modified before distributing the actual survey to respondents. The result of pre-test could be used to determine the significance and effectiveness of the questionnaire that the researcher will use to gather the data for this project.

Therefore, the researcher randomly selected 30 shippers who have experiences with using both freight forwarders and ocean liners. However, the researcher will ask for any comment from the sample respondents in order to improve the questionnaire accordingly.

Reliability analysis technique is used in this study for the pre-test. It could determine the consistency of independent items from the respondent's answers about the same object, group, or situation and present the information about the relationships between individual items in the scale. Cronbach's alpha coefficient analysis is applied to measure the reliability score of the questionnaire. Thus, the questionnaire is considered reliable and the result of this test is shown in Table 3.4 below.

Table 3.4: Reliability Analysis Results

Variables	No of the items	Cronbach's Alpha
Freight rate	5	0.875
Responsiveness and Assurance	5	0.881
Reliability and Reputation	4	0.871
Resource availability	3	0.791
Information Technology	4	0.888
Relationship Quality	3	0.741
Intention to select logistics service providers	4	0.871

3.5 Data Collection Plan

The data was collected by the questionnaire survey. The questionnaires were distributed to the customers who actually act as direct shipper. The sample target is the person who is assigned to make decision on selecting logistics partners for its company. The procedure is carried out by sending the questionnaire through e-mail and handing them over to key persons of each company depending on respondents preferably situation at that time. However, the researcher called the respondents after

sending the questionnaire by e-mail in order to ensure the receipt of survey form and solicit more feedback as well. The returned questionnaires were used for data analysis process as explained in the next step.

3.6 Data Analysis Plan

A statistical package for Social Science (SPSS) is selected for the analysis method for this study. The statistical result will be generated by inserting the collected data into SPSS computer program and then transforming it into numbers. Moreover, the SPSS program will be used to perform the four techniques that are descriptive data analysis, multiple linear regression analysis, t-test analysis and to summarize the data.

3.6.1 Descriptive Analysis

Descriptive analysis is employed to analyze the company profile of respondents that can be explained with regard to the personal background, characteristics of the company, and frequently used logistics service providers (for number of responses related to customer's behavior and values of variables) and descriptive statistics which is indicated in part no. 3 of the questionnaire.

3.6.2 Regression Analysis

Regression analysis is used to test hypothesis which consists of two models, simple regression and multiple linear regression. According to Pedhazur (1982), Simple linear regression can be described the relationship between an independent variable and a dependent variable. In the meantime, multiple regressions operates the same principles as simple regression but there are additional independent variables to be included in the regression model to determine the dependent variable simultaneously. In brief that multiple linear regression offers the advantages of allowing the researcher to test the impact of multiple independent variables acting in conjunction with one another on the dependent variable.

As discussed above, the regression model is used to analyze the expected changes in the dependent variable as a result of changes in the independent variables and shows a linear relationship between each independent variable and the dependent variable. When the null and alternative hypothesis was defined, then the calculation can be conducted. As of the calculation, when $H_0: \beta_1 = 0$, it can be concluded that there is no linear relationship between independent variable and dependent variable, but if the result shows that $H_0: \beta_1 \neq 0$, the conclusion is that there is linear relationship exists between independent variable and dependent variable.

For this study, the regression analysis is used to test the hypotheses 1 and 2, and the significance relationship between the intentions of customer to select sea freight service provided by freight forwarders and ocean liners, and influential factors that affect customer's behavioral intention. Furthermore, there are several independent variables that are defined in this study. The multiple regression will be used to the relationship between six independent variables and a dependent variable. The equation can be presented as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

Where

Y = Customer intention to select freight forwarders or ocean liners

X1 = Freight rate

X2 = Responsiveness and assurance

X3 = Reliability and Reputation

X4 = Resource availability

X5 = Information technology

X6 = Relationship quality

β_0 = Y-axis interception (value of y when all $X_i = 0$)

β_i = the regression coefficient of independent variable (X_n)

ε = random error

3.6.3 Paired Sample T-test Analysis

Paired t-test is the statistical test which used to test the differences between two groups of this research. The purpose of conducting this study is to identify the customer's intention to select logistics service provider who has best service. Thus, the two population groups: freight forwarders and ocean liners that are tested intend to find out whether there is any difference between two of factors by comparing the means of these two groups. Anyhow, the t-test will be applicable if the distributions are normal and the means or standard deviations of both the two sample groups can be proved as same and correlated.

The t-test is the tests of statistical significance and can determine whether the probability is small. If the normal distribution of each target group is small or less than the level of significance which is at 0.05, it will lead to the rejection of the null hypothesis but acceptance of the alternative hypothesis. Otherwise, the null hypothesis is not rejected.

Hypotheses 3 and 4 were compared and analyzed by the paired sample t-test. The six independent variables are freight rate, responsiveness and assurance, reliability and reputation, resource availability, information technology and relationship quality that were measured in order to identify the intention of customers in selecting service from freight forwarders and ocean liners. Furthermore, in order to test the difference of two hypotheses, the p-value has to be analyzed.

P-value in this study is the probability of the customer's intention to select freight forwarders and ocean liners in sea freight transport service, which are shown within the same area of a normal distribution curve. If the percentage of p-value is greater than 5%, it means that there is a difference between freight forwarders and ocean liners in terms of customer's perception at 95% confidence interval.

After defining the important variables, four hypotheses will be analyzed by using all the statistical techniques as mentioned above. This is explained in Table 3.5.

Table 3.5: Data Analysis Plan

Hypothesis		Statistical
H1	Perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality influence customer intention to select FCL service provided by freight forwarders.	Multiple Regression Analysis
H2	Perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality influence customer intention to select FCL service provided by ocean liners.	Multiple Regression Analysis
H3	Perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality provided by freight forwarders and ocean liners are different.	Paired Sample T-test
H4	Customer intention to select FCL service from freight forwarders and ocean liners is different.	Paired Sample T-test

3.7 Summary

This researcher decided to use the questionnaire survey as the research instrument to collect data. All related methodology, which is used in this study, is described in this chapter. The methodology is useful to analyze the relationship between factors that influence the customer to select freight forwarders or ocean liners. Finally, all selected respondents of this study are required to answer the questionnaire sent through e-mail or by hand. Some respondents were individually interviewed by the researcher.

CHAPTER IV

PRESENTATION AND CRITICAL DISCUSSION OF RESULTS

This chapter aims to present the data analysis results. The questionnaires were distributed to one hundred customers who have direct experience with both freight forwarders and ocean liners. A total of 100 data sets were gathered. All are complete and usable for the data analysis. The research findings can be categorized into three parts: firstly, the descriptive analysis of company's profiles; secondly, the analysis of relationship between the influencing factors and customer intention to use sea freight service provided by freight forwarders and ocean liners; thirdly, the analysis of the comparison between customer intention to select freight forwarders or ocean liners. The details are presented in the following sections.

4.1 Company Profiles

The researcher has intentionally selected the samples by using past experience when dealing with them and also interviewed them to ensure that they are the key persons who are related to and can explained about this research. To understand the characteristics of the respondents and also respondents' behavior, the respondents were asked to express these ideas. The positions of the key informants are firstly analyzed followed by the company profiles, the number of freight forwarding companies and ocean liners that they use, the frequencies of using in week and month, and the period of time they dealt with their current logistics partners. Actually, this research was designed to analyze the data from 100 respondents as per the result of the calculation in Chapter three. But since all expected respondents might not response in time and the data might not sufficient enough, so that the questionnaire survey was distributed to 150 respondents and the total received was 110. However, this research used only 100 sets of questionnaire for analyzing the data and the details are presented in Table 4.1 to Table 4.4.

Table 4.1: Position of Respondents

Position	Percent
Management level	5.0
Decision making level	6.0
Supervisor level	31.0
Senior level	11.0
Entry level	47.0
Total	100.0

According to Table 4.1, most of the respondents are working at staff level (47.0 percent), supervisor level (31.0 percent), senior level (11.0 percent), decision making level (6.0 percent) and management level (5.0 percent).

The frequency of using the service from both freight forwarders and ocean liners is presented in Table 4.2. 75% of total respondents use sea freight service many times per week (75.0 percent), 9.0 percent of respondents use sea freight service once time a week, 11.0 percent use sea freight service by 2 to 3 times a month, 3 percent use sea freight service once time a month. There is only 1 percent that uses sea freight service less than once a month.

Table 4.2: Frequency of Service Use

Time	Percent
Many times per week	76.0
About once a week	9.0
1 – 2 times per month	11.0
About once a month	3.0
Less than once a month	1.0
Total	100.0

In addition, the number of companies that customers use at present time can be illustrated in the Table 4.3. There are about 51 respondents (51.0 percent) that use more than five companies when they need to export shipment, 30 respondents (30.0 percent) use around four to five companies, about 19 respondents (19.0 percent) use about two to three companies and zero respondents that use only one company. It can

be concluded that the majority of respondents considered selecting more than five companies to support them.

Table 4.3: Number of Company that Customer Selected

Number of Company	Percent
Only one company	0.0
2 – 3 companies	19.0
4 – 5 companies	30.0
More than 5 companies	51.0
Total	100.0

Table 4.4, the data presented the number of years that customers has used their current sea freight service providers. The highest number of years is 5 to 10 years (52.0 percent), about 1 to 4 years is second (40.0 percent). More than 10 years is not much (7.0 percent), and less than 1 year is almost none (1 percent). The result shows that long term relationship can affect customer intention.

Table 4.4: Number of Year that Customer Used

Number of Company	Percent
Less than one year	1.0
1 – 4 years	40.0
5 – 10 years	52.0
More than 10 years	7.0
Total	100.0

4.2 Hypotheses Testing

There are four hypotheses proposed to support the research objectives. The hypotheses can be classified into two groups. The first group includes Hypotheses 1 and 2, which proposes the influence of the key factors on the customer selection of sea freight service providers. The second group includes Hypotheses 3 and 4, which compares the perception of the shipper on customer's intention to select FCL service

from freight forwarders and ocean liners. Thus, Multiple regression analysis was used to test the first group and Paired sample t-test was used to test the second group.

4.2.1 The Influence of Influential Factors on Customer Intention to Select Freight Forwarders and Ocean Liners.

This part explains the relationship between influencing factors which are the independent variables and customer's intention in selecting FCL service from sea freight service providers which is the dependent variable of this research. First is to find the relationship between six factors and customer behavioral intention to use FCL service with freight forwarders. Second is to find the relationship between six factors and customer intention to use FCL service with ocean liners. The first and second hypothesis is as follows.

Hypotheses 1: Perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality influence customer intention to select FCL service of freight forwarders.

Hypotheses 2: Perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality influence customer intention to select FCL service of ocean liners.

The analysis of the results is presented in Table 4.5 and 4.6.

Table 4.5: Relationship between Influencing Factors and Customer's Intention to Select Freight Forwarders

Influencing Factors	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	p-value
(Constant)	1.366		2.019	0.046
Freight Rate	0.394	0.262	1.698	0.093
Responsiveness and Assurance	-0.778	-0.401	-2.820	0.006
Reliability and Reputation	0.567	0.339	2.535	0.013
Resources Availability	-0.417	-0.303	-2.207	0.030
Information Technology	0.494	0.378	3.122	0.002
Relationship Quality	0.329	0.156	1.336	0.185

a. Dependent variable: Customer Intention to select FCL service of freight forwarders

b. $F = 4.416$; $p < 0.001$; c. Adjusted $R^2 = 0.172$

According to Table 4.5, the F score was 4.416 and its p-value was 0.001 which was less than 0.05. Therefore, the significant relationship between customer intention to select freight forwarders and the proposed factors are illustrated. The Adjusted R Square presented was 0.172 which means that it was only 17.2 percent of the variability in customer's intention to select freight forwarders being explained by six influencing factors. For this particular case Adjusted R square was only 0.172. It can be explained that the key factors have less effect on the customer's behavior intention. Thus, the remaining 82.8 percent could be explained by other factors, which are discussed in Chapter Five.

The relationship between the dependent and each independent variable can be explained by taking into consideration of the p-value and the t-score for the unstandardized coefficient. The p-value of each research hypotheses must be less than 0.05 at 95-percent level of confidence for the null hypotheses to be rejected. This shows that the particular independent variable is significantly related to the dependent variable otherwise the null hypotheses will not be rejected and the factor is not significantly related to the dependent variable.

Furthermore, the p-value of responsiveness and assurance, reliability and reputations, resource availability and information technology were less than 0.05, in the mean

while freight rate and relationship quality were higher than 0.05. Thus, for freight forwarder, information technology was the most influenced customer intention ($\beta=0.378, p<0.05$), followed by reliability and reputation ($\beta=0.339, p<0.05$). However, responsiveness and assurance ($\beta=-0.401, p<0.05$), and resource availability ($\beta=-0.303, p<0.05$), were found to have relationship with customer intention since the p-value is less than 0.05, but the coefficient sign was negative. It means that responsiveness and assurance, and resource availability are not positively related to customer intention to select freight forwarders. It can explain the reason for negative results occurs with freight forwarders compared to ocean liners. In actually, these two factors effect each other. Loss of control on space and equipment has one of the most significant affects on customers' willingness to select freight forwarder since they do not have own assets like ocean liners. Thus, freight forwarders have to wait for space and equipment confirmation which is provided by ocean liners before releasing the booking to customers. Sometime, freight forwarder could not reach customers' requirements within the agreed time because of uncontrollable or unexpected situations that occur such as the consequential delays because of the ocean liners' process, full space because of space limitation provided by ocean liners and the postponement to next schedule without prior notice from ocean liners. This is an important problem for freight forwarders since they act as the middle men between ocean liners and customers. Because of these reasons, the customer will feel disappointed may not continue to support freight forwarders but switch to ocean liners directly instead. This causes loss of confidence of customers toward freight forwarders service sometimes when they face this kind of problem. Because of this reason, the customers will perceive responsiveness and assurance, and resource availability of freight forwarders in a negative way.

In addition, significance influence of freight rate and relationship quality was not found since p-value is higher than the standard level ($\beta=0.262, p>0.05$), ($\beta=0.156, p>0.05$) respectively. Hence, Hypothesis 1 is partially supported by the data.

In summary, only two factors significantly contribute to the customer's intention to select freight forwarders. Other factors are less affected. This indicates that freight

forwarders should consider reducing freight rates, having more resources and improving relationship quality with the customers and existing customers in order to compete with ocean liners.

Table 4.6: Test Relationship between Influencing Factors and Customer's Intention to Select Ocean Liners

Influencing Factors	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	T	P-Value
(Constant)	1.771		3.535	0.001
Freight Rate	0.381	0.314	2.694	0.008
Responsiveness and assurance	0.411	0.328	2.780	0.007
Reliability and Reputation	0.133	0.100	0.860	0.392
Resources Availability	-0.156	-0.113	-0.961	0.339
Information Technology	-0.262	-0.190	-1.660	0.100
Relationship Quality	-0.024	-0.018	-0.131	0.896

a. Dependent variable: Customer Intention to select FCL service of ocean liners

b. $F = 4.642$; $p < 0.0001$

c. Adjusted $R^2 = 0.181$

Table 4.6 indicates that the F score is 4.642 and its p-value is 0.0001 which is less than 0.05. Therefore, the perceived freight rate, responsiveness, reliability and reputation, resources availability, information technology and relationship quality could influence customer intention to select FCL service from ocean liners. As the adjusted R square was 0.181, it reveals that there is only 18.1 percent of the variability in the customer's intention to select FCL service with ocean liners being explained by six influencing factors. It also means that the key factors have less effect on the customer's behavioral intention. Thus, the remaining 81.9 Percent could be explained by other factors, which are discussed in Chapter Five.

Furthermore, the p-value of freight rate and responsiveness were less than 0.05, while reliability and reputation, resources availability, information technology and relationship quality were higher than 0.05. Therefore, for ocean liner, there are only two influencing factors that are significantly related to customer's intention is include freight rate ($\beta = 0.314$, $p < 0.05$), and responsiveness and assurance ($\beta = 0.328$, $p < 0.05$).

Significant influence of reliability and reputation, resources availability, information technology and relationship quality were not found to be significant ($t=0.100$, $p>0.05$), ($\beta=-0.113$, $p>0.05$), ($\beta=-0.190$, $p>0.05$) and ($t=-0.018$, $p>0.05$) respectively. Resource availability and information technology had a negative relationship with customer intention to select FCL service from ocean liners because its t value was negative. Hence, Hypothesis 2 is partially supported the data. Freight rate and responsiveness influenced customer's intention to select FCL service from ocean liners while reliability and reputation, resources availability, information technology and relationship quality had no impact. Responsiveness and assurance were found to have the highest influence on customer intention followed by freight rate (standardized $\beta = 0.328$ and 0.314).

As mentioned in Chapter one, ocean liners have more resources and own assets to provide to customers so the offer of more competitive rates to customers than freight forwarders is possible. Therefore, this analysis of results can be supported through this conclusion. In addition, responsiveness has more affect on customers to select FCL service from ocean liners than freight forwarders. However, ocean liners should continue to improve their products and services especially for reliability and reputation, resource availability, information technology and relationship quality to the customers in order to gain more profit and also reduce the number of competitors of the company.

4.2.2 Comparison of Customer Intention to select FCL service from Each Sea Freight Service Providers and its Influencing Factors

The second group consists of two main hypotheses for comparing the mean difference, including Hypothesis 3 and 4. Hypothesis 3 aims to investigate the different perception on each influencing factor, which consists of freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality. Furthermore, Hypothesis 4 aims at comparing the difference of customer intention to select FCL service from freight forwarders and ocean liners. The hypotheses details are as follows:

Hypotheses 3: Perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality provided by freight forwarders and ocean liners are different.

Hypotheses 4: Customer intention to select FCL service from freight forwarders and ocean liners is different.

For Hypotheses 3, all the key factors were measured by the rating on four scales, from minimum 1: strongly disagree to maximum 4: strongly agree. For Hypotheses 4, the customer intention was measured by the rating on five scales, from minimum 1: strongly disagree to maximum 5: strongly agree. The analysis results are presented in Table 4.7.

Table 4.7: Comparison of Customer Intention to select Sea Freight Service Providers and its Influencing Factors

Influencing Factors	Mean		Difference			
	Freight Forwarder	Ocean Liner	Mean*	SE**	t-score	P-value
Freight Rate	2.948	2.754	0.194	0.420	4.617	0.000
Responsiveness and Assurance	3.006	2.824	0.182	0.485	3.753	0.000
Reliability and Reputation	3.093	3.270	-0.178	0.425	-4.173	0.000
Resource Availability	2.973	2.867	0.107	0.459	2.324	0.022
Information Technology	2.848	3.123	-0.275	0.497	-5.535	0.000
Relationship Quality	3.037	2.943	0.093	0.408	2.289	0.024
Intention to Select	3.151	3.223	-0.071	0.005	-13.119	0.000

Remarks: * Mean of difference

** Standard error of difference

Table 4.7 shows the comparison of all six influencing factors that affect the freight forwarders and ocean liners. The Paired Sample t-test analysis was performed to test the significance of the mean differences. Significant differences of six influencing factors of customer intention including freight rate, responsiveness and assurance, reliability and reputation, resource availability, information technology and

relationship quality were found. The freight rate, responsiveness and assurance, resource availability and relationship quality which is provided by freight forwarders is higher than ocean liners ($t=4.617, 3.753, 2.324$ and 2.289 ; $p<0.05$). In contrast, reliability and reputation, and information technology which is provided by ocean liners is higher than freight forwarders ($t=-4.173$ and -5.535 ; $p<0.05$).

According to results, it can be concluded that the perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality provided by freight forwarders and ocean liners are significantly different. Moreover, as the p-value of customer intention to select is less than 0.05 ($0.0001<0.05$), it could be concluded that customer intention to select FCL service from freight forwarders is significantly less than that from ocean liners ($t=-13.119$, $p<0.05$). As such, Hypothesis 3 and Hypothesis 4 were supported by the data.

In summary, the customers will consider selecting freight forwarders and ocean liners based on the perception of the freight rate, responsiveness, reliability and reputation, resource availability, information technology and relationship quality when select sea freight service providers. In addition, the customers have the tendency to select FCL services from ocean liners before freight forwarder. This indicates that ocean liners have a better standing than freight forwarders in the current market. Therefore, freight forwarders should consider improving their services and products for customers in order to compete with ocean liners.

4.3 Conclusion of Hypotheses Testing

The findings indicated positive relationships between influencing factors of freight rate, responsiveness and resources availability toward the customer's intention to select FCL service from freight forwarders compared to ocean liners. However, reliability and reputation, and information technology that is provided by ocean liners influenced the customer's intention to select FCL service more than freight forwarders. It meant that these results are inconsistent as expected. Anyhow, it can be

concluded that the customers perceived the factors between freight forwarders and ocean liners differently. The results of hypotheses testing can be summarized in the Table 4.8 as below:

Table 4.8: Summary of Hypotheses Testing

Hypothesis & Hypothesis Statement		Result
H1	Perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality influence customer intention to select FCL service of freight forwarders.	Partially Supported
	a: Perceived freight rate → Intention to select F/F	Not Supported
	b: Responsiveness and assurance → Intention to select F/F	Supported
	c: Reliability and reputation → Intention to select F/F	Supported
	d: Resources availability → Intention to select F/F	Supported
	e: Information technology → Intention to select F/F	Supported
	f: Relationship quality → Intention to select F/F	Not Supported
H2	Perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality influence customer intention to select FCL service of ocean liners.	Partially Supported
	a: Perceived freight rate → Intention to select O/L	Supported
	b: Responsiveness and assurance → Intention to select O/L	Supported
	c: Reliability and reputation → Intention to select O/L	Not Supported
	d: Resources availability → Intention to select O/L	Not Supported
	e: Information technology → Intention to select O/L	Not Supported
	f: Relationship quality → Intention to select O/L	Not Supported
H3	Perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality provided by freight forwarders and ocean liners are different.	Supported
	a: Perceived freight rate	Supported
	b: Responsiveness and assurance	Supported
	c: Reliability and reputation	Supported
	d: Resources availability	Supported
	e: Information technology	Supported
	f: Relationship quality	Supported
H4	Customer intention to select FCL service from freight forwarders and ocean liners is different.	Supported

4.4 Summary

This chapter presents the data analysis results that were analyzed using the SPSS statistical program. The data was gathered from the questionnaire surveys which were distributed to one hundred customers who have direct experience of using sea freight services from freight forwarders and ocean liners.

According to the Hypotheses testing results, the Adjusted R Square indicated that there is only 17.2 percent of the variability in the customer's intention to select freight forwarders and 18.1 percent of the variability in the customer's intention to select ocean liners. This is explained by the coefficient based on the six influencing factors. The significance of F which is less than 0.05 shows that there is a linear relationship and the coefficients can be accepted. However, the perceived of freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality of customer toward freight forwarders and ocean liners is different. The four significant influencing factors toward customer's intention to select freight forwarders are responsiveness and assurance, reliability and reputation, resource availability and information technology, while freight rate and responsiveness, significantly influence customer's intention to select ocean liners.

Furthermore, the Paired t-test analysis, shows that the perceived freight rate, responsiveness and assurance, reliability and reputation, resources availability, information technology and relationship quality provided by freight forwarders and ocean liners were different.

CHAPTER V

SUMMARY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter discusses the conclusion of the data analysis, theoretical implications, managerial implications, and limitations and recommendations for future research. The conclusions of this study present the analysis of results from the hypotheses testing as mentioned in the previous chapter. The theoretical implication explains about the research framework of this study. The managerial implication explains the supporting reasons of customer's behavioral intention. Finally, the recommendations and possibility for further research are discussed in the last section.

5.1 Summary of the Findings and Conclusions

This research aims to study the factors influencing customer's intention to select sea freight services from freight forwarders and ocean liners. The six factors that were selected for the study are freight rate, responsiveness and assurance, reliability and reputation, resource availability, information technology and relationship quality.

The result presented that the customer intention to select freight forwarders is significantly influenced by responsiveness and assurance, reliability and reputation, resource availability and information technology, while freight rate and relationship quality are marginally significant. However, the coefficient sign of responsiveness and assurance, and resource availability found negative results. The supporting reason for negative results is about no control of space and equipment of freight forwarders. This affects customers' willingness to select freight forwarders because ocean liners can guarantee space and equipment quicker than freight forwarders. It can be concluded that there are only two factors which are reliability and reputation, and information technology that have a positive relationship on customer's intention to select freight forwarders which is the dependent variable of this research. It is found

that freight rate, and responsiveness and assurance has a significant affect on customer's intention to select ocean liners while reliability and reputation, resource availability, information technology and relationship quality is not significantly influence the customer's intention. It means that the two factors which consist of freight rate and responsiveness are positively related to the dependent variable in this research condition. However, the responsiveness and assurance has a p-value less than 0.05 which indicates customer's intention to select between freight forwarders and ocean liners to provide sea freight services for them. It means that the customer is willing to select a service provider who has more responsiveness and attention according to their requirements.

Furthermore, the comparison between freight forwarders and ocean liners on perception of each independent variable can be presented from the results of this study. Perceived freight rate, responsiveness and assurance, resource availability and relationship quality of freight forwarders has positive results and significantly higher than ocean liners ($t=4.617, 3.753, 2.324$ and 2.289 ; $p<0.05$). However, perceived reliability and reputation, and information technology comparison were made between freight forwarders and ocean liners. The analysis only marginally supported the hypotheses since the result was negative of the mean difference and the p-value was less than 0.05 ($t=-4.173$ and -5.535) However, the customer's intention to select freight forwarders and ocean liners is significantly different since the p-value was less than 0.0001.

5.2 Theoretical Implications

This research has been designed to test the relationship between dependent variable and independent variables. Moreover, the two dependent variables were considered for analyzes from two different type of sea freight service providers which are freight forwarders and ocean liners. The purpose of the study is to identify the customer's behavioral intention to select between the two groups of independent variables. The independent variables were six influential factors that are freight rate, responsiveness and assurance, reliability and reputation, resource availability, information technology

and relationship quality based on the literature reviewed of this study. All variables were proposed in the conceptual framework.

From the results of this research, the six factors could not fully explain the customer's intention to select freight forwarders and ocean liners since the significance level was low. It means that the model should be revised and considered other factors such as service quality, service outcome, financial benefits, and marketing tools. In addition, the scope, the measurement of each factor as well as the methodology should be redesigned. However, responsiveness and assurance was found to significantly influence customer's intention for freight forwarders and ocean liners which indicates that these factors should be kept in the model. The results of this research found that some factors highly affect customer's intention but some factors do not. Other researchers can adapt and use these findings to be a guidance of the further research when they need to select appropriate factors to analyze their research especially for other areas of logistics service because of high competition among logistics service providers in the current market. In summary, there are not only small factors that could be considered but there are many factors that other researchers should consider when they need to analyze the typical need of customers.

5.3 Managerial Implications

The benefits of this study is that companies can use this information to adjust and improve its business performance in order to maintain good relationships with the existing customers and also expand to new business targets in the future.

The findings of the research found that responsiveness and assurance, reliability and reputation, resource availability and information technology influence customer's intention to obtain sea freight service from freight forwarders. Responsiveness and assurance is about the responsibility and the willingness of staff to serve the customers. The customer will be satisfied when the staff has good and active response to them. Reliability and reputation is related to the customer's loyalty to good reputation and reliability of the sea freight service industry. The resource availability

is about the capacity and capability of sea freight service providers have sufficient to support customers whenever they need and also meet their requirements. Information technology is kind of service tool that customers need in order to have convenience to reach their requirements faster than the manual process of the company's staff and also not have limitation on time and distance.

However, the freight forwarders should emphasize these three main factors in order to improve their strengths and weaknesses to compete with competitors like ocean liners who can also offer FCL service. The management team should emphasize on service quality provided by the staff that influence the customer's perception. Therefore, they should encourage their staffs to be highly responsible to serve the customers as well as increase staff knowledge and skill in operations process. The good training helps the staff to increase their performance and efficiency in working. Furthermore, the reputation and reliability of the company can maintain the loyalty of customers to the company and they should be aware of these importance criteria. Also the company should continue improve information technology and seek out for high technology to support their customers such as a Radio-Frequency Identification (RFID) systems or Equipment Pickup Appointment (EPA) systems that are consistent with customer demand for tracing and tracking ability of shipment status as well as container movement status. The customer service hot line will be a good alternative choice for customers to have fast response with easy access to their regular requirement.

5.4 Limitations and Recommendations for Future Research

According to the results of this research, some factors are not significant and do not affect to customer's intention to select freight forwarders and ocean liners. Thus, the company could conduct further research to explore other dimensions that could influence customer's selection. However, the service quality such as service outcome, service process and service management now plays an important role in increasing the customer satisfaction in a current high competitive market so that the company should consider to have more awareness about these factors. Service quality can present how

differences of performance provided from each company effects the customer's willingness to select the logistics partners to support their requirements.

Moreover, this research could be applied to other logistics services, such as air freight transports, road transports, shipping activities, container yard service offered in Thailand.



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APPENDIX A

Questionnaire (English Version)



TRANSPORTATION SERVICE SELECTION SURVEY

Dear respondents,

This questionnaire is designed to study the influential factors of customer intention to select an international freight forwarder or ocean liner which is a part of a graduate's project OF the Master of Science in Supply Chain Management Program at Assumption University. All information provided will be confidential and will be used for academic research purpose only. Please answer all questions candidly. Your valuable time and answer are much appreciated. Thank you for your kind cooperation.

Part A: Influencing factors on behavioral intention to select sea freight service provider

Please specify your opinion toward freight forwarder and ocean liner, by marking (✓) in the space that best explains to your opinion. Please think of the maritime transport service providers that you use most often and give your opinion on both freight forwarder and ocean liner. The numbers of rating scale represent to 4 (Strongly agree), 3 (Agree), 2 (Disagree) and 1 (Strongly disagree).

Your opinion on sea freight transport service of the selected service providers.		Level of Your Opinion							
		Freight Forwarder				Ocean Liner			
Freight Rate		Strongly Agree	→ Strongly Disagree	→ Strongly Disagree	→ Strongly Disagree	Strongly Agree	← Strongly Disagree	← Strongly Disagree	← Strongly Disagree
1	Freight rate has the best competitive.	4	3	2	1	4	3	2	1
2	Freight rate is reasonable.	4	3	2	1	4	3	2	1
3	Freight rate can be negotiated.	4	3	2	1	4	3	2	1
4	Freight rate is attractive.	4	3	2	1	4	3	2	1
5	You feel satisfied with the freight rate offered by the logistics service providers.	4	3	2	1	4	3	2	1
Responsiveness and Assurance									
6	The staff makes an effort to understand your requirements.	4	3	2	1	4	3	2	1
	The staff always responds to your requirements within the time requests.	4	3	2	1	4	3	2	1
8	The staff has willingness to serve and help you to solve problems within the agreed time.	4	3	2	1	4	3	2	1
9	The staff was able to handle your complains and provide an appropriate solution for your problem.	4	3	2	1	4	3	2	1

Your opinion on sea freight transport service of the selected service providers.		Level of Your Opinion							
		Freight Forwarder				Ocean Liner			
10	The staff always have good suggestion to you when need.	4	3	2	1	4	3	2	1
Reliability and Reputation									
11	You trust in service provided by the logistics service providers.	4	3	2	1	4	3	2	1
12	You believe that logistics service providers can offer service professionally.	4	3	2	1	4	3	2	1
13	Logistics service providers are reliable company.	4	3	2	1	4	3	2	1
14	Logistics service providers have a good reputation in maritime transport service.	4	3	2	1	4	3	2	1
Resource availability									
15	Logistics service providers have sufficient space and always available to serve when needed.	4	3	2	1	4	3	2	1
16	Equipment and facilities are sufficiently available.	4	3	2	1	4	3	2	1
17	Logistics service providers can serve more alternative choices.	4	3	2	1	4	3	2	1
Information Technology support									
18	Logistics service providers have sufficient information technology to support your requirements.	4	3	2	1	4	3	2	1
19	Internet tool is available to support your requirements.	4	3	2	1	4	3	2	1
20	It is convenient for you to update the status of shipment on the website created by the logistics service providers.	4	3	2	1	4	3	2	1
21	Shipment tracing & tracking capability is sufficient.	4	3	2	1	4	3	2	1
Relationship Quality									
22	You are satisfied with the overall service provided by the staff of the company.	4	3	2	1	4	3	2	1
23	You have a positive experience and good impression with the logistics service providers.	4	3	2	1	4	3	2	1
24	Due to long term relationship between you and logistic service providers in effect that you do not need to change to another logistic service providers.	4	3	2	1	4	3	2	1

Part B: Behavioral intention to select service from freight forwarders or ocean liners

Please specify your opinion toward freight forwarder and ocean liner, by marking (✓) in the space that is closest to your opinion. The numbers of rating scale represent to 5 (Strongly agree), 4 (Agree), 3 (Neutral), 2 (Disagree) and 1 (Strongly disagree).

Your opinion toward the logistics service providers in maritime transport service.		Level of Your Opinion				
Intention to select logistics service provider		Definitely Yes -- Definitely No				
25	You usually consider using service provided by freight forwarders as the first priority.	5	4	3	2	1
26	You usually consider using service provided by ocean liners as the first priority.	5	4	3	2	1
27	You intend to deal with freight forwarders only.	5	4	3	2	1
28	You intend to deal with ocean liners only.	5	4	3	2	1

Part C: Company Profile and Personal Data

Please specify about your company profile and personal data by marking (✓) in the bracket.

- Your position level

() Management level	() Decision making level
() Supervisor level	() Entry level
() Senior level	() Others (please specify.....)
- How often does your company export with logistics service provider (either freight forwarders or ocean liners)?

() Many times per week	() About once a week
() 1-2 times per month	() About once a month
() Less than once a month	() Others (please specify.....)
- How many companies do you select to support your company?

() Only one company	() 2-3 companies
() 4-5 companies	() More than 5 companies
() Others (please specify.....)	

4. How long have you dealt with each logistics service provider?
- | | |
|---|---|
| <input type="checkbox"/> Less than 1 year | <input type="checkbox"/> 1-4 years |
| <input type="checkbox"/> 5-10 years | <input type="checkbox"/> More than 10 years |
5. What are the reasons when you use to select logistics service providers (You can select more than one answer)?
- | | |
|---|--|
| <input type="checkbox"/> Nomination of shipment | <input type="checkbox"/> Competitive freight rate |
| <input type="checkbox"/> Good service quality | <input type="checkbox"/> Variety of service provided |
| <input type="checkbox"/> Company's image | <input type="checkbox"/> IT support |
| <input type="checkbox"/> Positive past experience | <input type="checkbox"/> Recommended by others |
| <input type="checkbox"/> Good relationship | <input type="checkbox"/> Special promotion |
| <input type="checkbox"/> Other please specify | |

Thank you for your kind cooperation





APPENDIX B

Questionnaire (Thai Version)



แบบสอบถามความคิดเห็นในการเลือกใช้บริการขนส่งสินค้า

เรียน ผู้ตอบแบบสอบถาม,

แบบสอบถามฉบับนี้ ได้จัดทำขึ้นเพื่อศึกษาเกี่ยวกับปัจจัยต่างๆ ที่ส่งผลต่อลูกค้าในการตัดสินใจเลือกใช้บริการขนส่งสินค้าทางเรือกับ บริษัทเดินเรือขนส่งสินค้าระหว่างประเทศ ของการศึกษาในระดับปริญญาโท สาขาการจัดการห่วงโซ่อุปทาน คณะบริหารธุรกิจ มหาวิทยาลัยอัสสัมชัญ ผู้ใช้บริการขนส่งสินค้าทางเรือ คณะนักศึกษาผู้วิจัยฯใครขอความร่วมมือจากท่านในการตอบแบบสอบถามฉบับนี้ จากท่านจะถูกนำไปใช้ในการประมวลผลและวิเคราะห์เพื่อประโยชน์ทางการศึกษาในภาพรวมเท่านั้น รายละเอียดและแหล่งข้อมูลเป็นรายบุคคลแต่อย่างใด ทั้งนี้ ผู้วิจัยฯใครขอขอบพระคุณในความร่วมมือของท่านมา ณ

ส่วน 1 ทัศนภาพและการบริการที่ได้รับจากบริการด้านโลจิสติกส์

สินค้า (Freight Forwarder) และบริษัทเดินเรือขนส่งสินค้าระหว่างประเทศ (Ocean Liner) โดยทำเครื่องหมาย (✓) ความคิดเห็นของท่านมากที่สุด ทั้งนี้ ระดับความคิดเห็น จะ ถูกแบ่งออกเป็น 4 ลดลงไปตามลำดับ โดย 4 “เห็นด้วย” 3 หมายถึง “เห็นด้วย” 2 หมายถึง “ไม่เห็นด้วย” และ 1 หมายถึง “ไม่เห็นด้วยอย่างยิ่ง”

ความคิดเห็นของท่านที่มีต่อผู้ให้บริการขนส่งสินค้าทางเรือ		ระดับความคิดเห็น							
		ตัวแทน ขนส่งสินค้า				บริษัทเดินเรือขนส่งสินค้า			
ค่าบริการขนส่งสินค้า		เห็นด้วย ← ไม่เห็นด้วย อย่างยิ่ง อย่างยิ่ง				เห็นด้วย → ไม่เห็นด้วย อย่างยิ่ง อย่างยิ่ง			
1	ผู้ให้บริการฯ เสนอราคาค่าบริการที่คุ้มค่าที่สุด	4	3	2	1	4	3	2	1
2	ผู้ให้บริการฯ คิดราคาค่าบริการอย่างเหมาะสม	4	3	2	1	4	3	2	1
3	ท่านสามารถต่อรองราคาค่าบริการกับผู้ให้บริการฯได้	4	3	2	1	4	3	2	1
4	ผู้ให้บริการฯ เสนอราคาที่น่าสนใจ	4	3	2	1	4	3	2	1
5	ท่านรู้สึกพึงพอใจกับราคา บริการที่ได้รับการเสนอจ จากผู้ให้บริการฯ	4	3	2	1	4	3	2	1

ความคิดเห็นของท่านที่มีต่อผู้ให้บริการขนส่งสินค้าทางเรือ		ระดับความคิดเห็น							
		ตัวแทนผู้รับขนส่งสินค้า				บริษัทเดินเรือขนส่งสินค้า			
ความรับผิดชอบต่อการทำงาน									
6	พนักงานมีความพยายามและความเข้าใจในความต้องการของท่าน	4	3	2	1	4	3	2	1
7	พนักงานสามารถตอบสนองความต้องการของท่านได้ภายในระยะเวลาที่กำหนด	4	3	2	1	4	3	2	1
8	พนักงานมีความตั้งใจที่จะให้บริการและช่วยเหลือแก้ไขปัญหาของท่านตามระยะเวลาที่ตกลงกันได้	4	3	2	1	4	3	2	1
9	พนักงานสามารถรับมือกับคำร้องเรียนและเสนอหนทางในการแก้ไขปัญหาได้อย่างเหมาะสม	4	3	2	1	4	3	2	1
10	พนักงานสามารถให้คำแนะนำที่ดีให้แก่ท่านได้ทุกครั้ง	4	3	2	1	4	3	2	1
ความน่าเชื่อถือ และ ความมีชื่อเสียง									
11	ท่านมีความเชื่อมั่นในบริการที่ได้รับจากผู้ให้บริการ	4	3	2	1	4	3	2	1
12	ท่านเชื่อว่าผู้ให้บริการมีความชำนาญที่จะบริการท่านได้เป็นอย่างดี	4	3	2	1	4	3	2	1
13	ผู้ให้บริการ เป็นบริษัทที่น่าเชื่อถือ	4	3	2	1	4	3	2	1
14	ผู้ให้บริการ เป็นบริษัทที่มีชื่อเสียงดีในการให้บริการขนส่งสินค้าทางเรือ	4	3	2	1	4	3	2	1
ทรัพยากรในการให้บริการ									
15	ผู้ให้บริการมีความพร้อมในการจัดหาระวางสินค้าซึ่งสามารถรองรับความต้องการของท่านได้อย่างเพียงพอ	4	3	2	1	4	3	2	1
16	ผู้ให้บริการสามารถจัดหาตู้สินค้าและอุปกรณ์อำนวยความสะดวกแก่ท่านได้อย่างเพียงพอ	4	3	2	1	4	3	2	1
17	ผู้ให้บริการสามารถเสนอทางเลือกที่หลากหลายให้แก่ท่านได้	4	3	2	1	4	3	2	1
เทคโนโลยีการสื่อสาร									
18	ผู้ให้บริการ มีเทคโนโลยีการสื่อสารที่สามารถรองรับความต้องการของท่านได้	4	3	2	1	4	3	2	1
19	ผู้ให้บริการ มีการบริการข้อมูลออนไลน์ ทางอินเทอร์เน็ตที่สะดวกรวดเร็ว	4	3	2	1	4	3	2	1
20	ท่านได้รับความสะดวกจากการที่สามารถเข้าถึง ข้อมูลข่าวสารความเคลื่อนไหวของชิพเมนต์ของท่านผ่านทางเว็บไซต์ของผู้ให้บริการ	4	3	2	1	4	3	2	1
21	ข้อมูลข่าวสารเกี่ยวกับชิพเมนต์ที่ท่านได้รับ เพียงพอ ถูกต้องและแม่นยำ	4	3	2	1	4	3	2	1

ความคิดเห็นของท่านที่มีต่อผู้ให้บริการ เรือขนส่งสินค้าทางเรือ		ระดับความคิดเห็น							
		ตัวแทนผู้รับขนส่งสินค้า				บริษัทเดินเรือขนส่งสินค้า			
ความผูกพันและความเชื่อมั่นที่มีต่อผู้ให้บริการ เรือ									
22	ท่านรู้สึกพึงพอใจในการให้บริการของพนักงานโดยรวม	4	3	2	1	4	3	2	1
23	ท่านได้รับประสบการณ์และความประทับใจจากก ารบริการที่ได้รับจากผู้ให้บริการ เรือ	4	3	2	1	4	3	2	1
24	เนื่องจากความผูกพันและความสัมพันธ์อันดีที่มีมานานอย่างต่อเนื่องระหว่างท่านกับผู้ให้บริการ เรือ ส่งผลให้ท่านไม่ยอมเปลี่ยนไปใช้บริการกับผู้ให้บริการท่านอื่น	4	3	2	1	4	3	2	1

ส่วนที่ 2 :

หรือ บริษัทเดินเรือฯ

กรุณาแสดงความคิดเห็นของท่านที่มีต่อผู้ให้บริการขนส่งสินค้าทางเรือที่ท่านใช้อยู่ในปัจจุบัน ทั้งกับตัวแทนผู้รับบริการขนส่งสินค้า (Freight Forwarder) และบริษัทเดินเรือขนส่งสินค้า (Ocean Liner) โดยทำเครื่องหมาย (✓) ในช่องที่ตรงกับความคิดเห็นของท่านมากที่สุด Y1514 ระดับความคิดเห็น จะถูกแบ่งออกเป็น 5 ระดับ ดังต่อไปนี้ตามลำดับ โดย 5 หมายถึง “ใช่แน่นอน” 4 หมายถึง “แน่นอน” 3 หมายถึง “ยังไม่แน่นอน” 2 หมายถึง “_____” และ 1 หมายถึง “ไม่ใช่แน่นอน”

การตัดสินใจเลือกใช้บริการกับผู้ให้บริการด้านโลจิสติกส์		ระดับความคิดเห็น				
		ใช่แน่นอน ↔ ไม่ใช่แน่นอน				
25	ท่านพิจารณาเลือกใช้บริการจากบริษัทตัวแทนผู้รับจัดการขนส่งสินค้าก่อนเป็นลำดับ	5	4	3	2	1
26	ท่านพิจารณาเลือกให้บริการจากบริษัทเดินเรือขนส่งสินค้าก่อนเป็นลำดับแรก	5	4	3	2	1
27	ท่านตั้งใจจะใช้บริการกับบริษัทตัวแทนผู้รับจัดการขนส่งสินค้าระหว่างประเทศท่านนั้น	5	4	3	2	1
28	ท่านตั้งใจจะใช้บริการกับบริษัทเดินเรือขนส่งสินค้าระหว่างประเทศท่านนั้น	5	4	3	2	1

วันที่ 3 : ข้อมูลทั่วไป

1. ตำแหน่งงานที่ท่านรับผิดชอบอยู่ในปัจจุบัน

- | | |
|--|--|
| <input type="checkbox"/> ระดับผู้บริหารงาน | <input type="checkbox"/> านาจอในการตัดสินใจ |
| <input type="checkbox"/> ระดับหัวหน้างาน | <input type="checkbox"/> ระดับผู้ปฏิบัติงาน |
| <input type="checkbox"/> ระดับอาวุโส | <input type="checkbox"/> อื่นๆ (โปรดระบุ.....) |

2. บริษัทของท่านมีการส่งออกสินค้า (ทั้งที่ผ่านตัวแทนผู้รับจัดการขนส่ง)

- | | |
|---|--|
| <input type="checkbox"/> หลายครั้งต่อสัปดาห์ | <input type="checkbox"/> |
| <input type="checkbox"/> ประมาณ 2-3 ครั้งต่อ | <input type="checkbox"/> ประมาณเดือนละครั้ง |
| <input type="checkbox"/> หลายเดือนต่อหนึ่งครั้ง | <input type="checkbox"/> อื่นๆ (โปรดระบุ.....) |

3. ปัจจุบัน ท่านได้พิจารณาเลือกใช้บริการกับผู้ให้บริการด้านโลจิสติกส์ ให้กับบริษัทของท่าน

- | | | |
|---|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> บริษัทเดียว | <input type="checkbox"/> 2-3 บริษัท | <input type="checkbox"/> 4-5 บริษัท |
| <input type="checkbox"/> มากกว่า 5 บริษัท | <input type="checkbox"/> 1-1 | |

4. โปรดระบุ ระยะเวลาที่ท่านได้ใช้บริการ กับผู้ให้บริการด้านโลจิสติกส์ ที่ท่านใช้จนถึงปัจจุบัน

- | | |
|---------------------------------------|--------------------------------------|
| <input type="checkbox"/> ปี | <input type="checkbox"/> sv1A2n1-1-4 |
| <input type="checkbox"/> ระหว่าง 5-10 | <input type="checkbox"/> wrin61-1011 |

5. โปรดระบุ เหตุผลที่ท่านใช้ในการพิจารณา กู้ใช้บริการกับบริษัทผู้ให้บริการด้านโลจิสติกส์

- | | |
|---|---|
| <input type="checkbox"/> ตัดสินใจโดยผู้ซื้อปลายทาง | <input type="checkbox"/> ราคาดีและเหมาะสม |
| <input type="checkbox"/> การบริการที่ดี | <input type="checkbox"/> ความหลากหลายของบริการ |
| <input type="checkbox"/> ภาพลักษณ์และชื่อเสียงของบริษัท | <input type="checkbox"/> การบริการด้านเทคโนโลยีสารสนเทศ |
| <input type="checkbox"/> ประสบการณ์ที่ดีที่ได้รับอย่างต่อเนื่อง | <input type="checkbox"/> ได้รับการแนะนำจากผู้อื่น |
| <input type="checkbox"/> ความสัมพันธ์ที่ดีระหว่างกัน | <input type="checkbox"/> เสนอพิเศษ |
| <input type="checkbox"/> โปรดระบุ | |

ขอขอบพระคุณอย่างสูงที่ท่านกรุณาให้ความร่วมมือตอบแบบสอบถามฉบับนี้



APPENDIX C

Data Analysis Result

Regression

A) Hypothesis 1

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	AFRS, AFRA, AFIT, AFRR, AFRN, AFFR		Enter

a. All requested variable entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.471 ^a	.222	.172	.695

a. Predictors: (Constant), AFRS, AFRA, AFIT, AFRR, AFRN, AFFR

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	12.813	6	2.136	4.416	.001 ^a
	Residual	44.977	93	.484		
	Total	57.790	99			

a. Predictors: (Constant), AFRS, AFRA, AFIT, AFRR, AFRN, AFFR

b. Dependent Variable: FIN2

Coefficients

Model	Unstandardized Coefficients		Starndardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.366	.676		2.019	.046
AFFR	.394	.232	.262	1.698	.093
AFRN	-.778	.276	-.401	-2.820	.006
AFRR	.567	.224	.339	2.535	.013
AFRA	-.471	.189	-.303	-2.207	.030
AFIT	.494	.158	.378	3.122	.002
AFRS	.329	.246	.156	1.336	.185

a. Dependent Variable: FIN2

B) Hypothesis 2

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	AORS, AOFR, AOIT, AORR, AORN, AORA		Enter

b. All requested variable entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.480 ^a	.230	.181	.599

a. Predictors: (Constant), AORS, AOFR, AOIT, AORR, AORN, AORA

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9.992	6	1.665	4.642	.000 ^a
	Residual	33.368	93	.359		
	Total	43.360	99			

a. Predictors: (Constant), AORS, AOFR, AOIT, AORR, AORN AORA

b. Dependent Variable: 01N2

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.771	.501		3.535	.001
AOFR	.381	.142	.314	2.694	.008
AORN	.411	.148	.328	2.780	.007
AORR	.133	.154	.100	.860	.392
AORA	-.156	.162	-.113	-.961	.339
AOIT	-.262	.158	-.190	-1.660	.100
AORS	-.024	.182	.018	-.131	.896

a. Dependent Variable: 01N2

Paired Sample T-test

A) Hypothesis 3

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
				95% Confidence Interval o f the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1 AFFR - AOFR	.1940	.4202	.0420	.1106	.2774	4.617	99	.000
Pair 2 AFRN - AORN	.1820	.4850	.0485	.0858	.2782	3.753	99	.000
Pair 3 AFRR - AORR	-.1775	.4254	.0425	-.2619	-.0931	-4.173	99	.000
Pair 4 AFRA - AORA	.1067	.4591	.0459	.0156	.1978	2.324	99	.022
Pair 5 AFIT - AOIT	-.2750	.4968	.0497	-.3736	-1.764	-5.535	99	.000
Pair 6 AFRS - AORS	.0933	.4078	.0408	-.0124	.1742	2.289	99	.024

B) Hypothesis 4

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 AFIN-AOIN	-.071	.054	.005	-.082	-.060	-13.119	99	.000