

**YANGON UNIVERSITY OF ECONOMICS
DEPARTMENT OF APPLIED ECONOMICS
MASTER OF PUBLIC ADMINISTRATION PROGRAMME**

**A STUDY ON SERVICE QUALITY AND CUSTOMERS'
SATISFACTION IN AIR CARGO SECTOR
(A CASE STUDY ON MCS AND YAACL CARGO TERMINAL)**

**ZAW MIN
EMPA-77 (18th Batch)**

OCTOBER, 2022

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A thesis submitted in partial fulfillment of the requirement for the
Master of Public Administration (MPA) Degree.

Supervised by:

Dr. Thet Mon Soe
Lecturer
Department of Applied Economics
Yangon University of Economics

Submitted by:

Zaw Min
Roll No. 77
EMPA-18th Batch
2019-2022

October, 2022

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This is to certify that this thesis entitled “**A Study on Service Quality and Customers’ Satisfaction in Air Cargo Sector (A Case Study on MCS and YACL Cargo Terminal)**”, submitted in partial fulfilment towards the requirements for the degree of Executive Master of Public Administration (EMPA) has been accepted by the Board of Examiners.

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.....

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(Examiner)

Professor and Head of Department

Department of Applied Economics

Yangon University of Economics

.....

Dr. Thet Mon Soe

(Supervisor)

Lecturer

Department of Applied Economics

Yangon University of Economics

October, 2022

ABSTRACT

This study aims at examining customers' satisfaction on service quality of service providers in the air cargo sector and observing the current situation of air cargo sector in Myanmar. The data are collected with the questionnaire based on the service quality dimensions from randomly selected 150 customers who are consigners and consignees. The result of the survey indicates that out of the five dimensions, responsiveness is rated at the highest level (2.99), followed by assurance (2.98), tangibles (2.96), reliability and empathy (2.86) each. According to the survey data, it is found that the customers satisfy average level on service quality and they want to use the service for the next time. According to the survey result, it is recommended that service provider need to enhance and fulfil the service quality to meet the customer requirements.

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LIST OF ABBREVIATIONS

AFFs	Air Freight Forwarders
AHP	Analytic Hierachy Process
ATAG	Air Transport Action Group
CAM	Contract Airmail
CRM	Customer Relationship Management
DCA	Department of Civil Aviation
DGB	Dangerous Goods Board
DGR	Dangerous Goods Regulations
FIL	Foreign Investment Law
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IOSA	IATA Operational Safety Audit Program
IRR	Internal Rate of Return
KGM	Knowledge Gap Model
LAPB	Live Animals and Perishibles Board
MACCS	Myanmar Automatic Cargo Clearance System
MAI	Myanmar Airways International
MCS	Mingalardon Cargo Services Public Co., Ltd.
MIA	Mandalay International Airport
MIC	Myanmar Investment Commission
MNA	Myanmar National Airlines
MOP	Master Operating Plan
MOTC	Ministry of Transport and Communications
NIA	Naypyitaw International Airport
SRAs	Service Requirement Attributes
TTWG	Time and Temperature Working Group
YACL	Yangon Aerodrome Co., Ltd.
YAG	Yangon Airport Group
YIA	Yangon International Airport

CHAPTER I

INTRODUCTION

In 1990s, the subsequent emergence of online business has been one of the main contributors to the growth of air cargo services. Air cargo transportation was changed by the phenomenon in the following manners such as increasing the volume of air cargo was contributed by the rapid increase in online business, a marked increase in effectiveness which in turn invigorated the demand for air cargo services was brought by the increased use of high-tech information and communication technologies and the growing usage of e-mail and the internet which caused decreasing in the items traditionally carried by couriers (such as small packages and documents). This increased use of e-mail and the internet resulted in lowering the Internal Rate of Return (IRR) within the air cargo industry, while also helping the industry transform itself into a low-cost structural industry, which is used to record high rate of return. All of them have resulted in making cargo services more attractive as an option. The quality of the services offered by air cargo service provider has become of the utmost importance is due to a competition for the air cargo transportation market has heated up. Giving the importance of air cargo services, this paper undertook the task of analyzing the differences between the service quality of air cargo service providers and the satisfaction of customers. This paper intends to analyze the relationship between customers' satisfaction and the service quality of service providers.

1.1 Rationale of the Study

Customers are the essential for any business. Those business fail to satisfy to retain customer usually end up with a decline in the overall profit, and demonstrate a limited prospective for growth. As the difficulties in both defining and measuring it with no overall consensus emerging on either, service quality is a concept that has aroused considerable interest and debate in the research literature. Customer

satisfaction and service quality are often treated together because of the functions of customer's perceptions and expectations. Moreover, research has shown that high service quality contribute significantly to profitability. To improve the quality in a service organization, service quality is required to be first measured. Regarding the better understanding of its indispensable antecedent and consequences, it is required that practitioners and academics on measuring service quality accurately and eventually ascertain methods for improving and measuring service quality in search for competitive advantage. Regarding the evaluation the level of service quality of service providers' perspective, it is required to use a descriptive statistics analysis. It is important the results of the study indicated that all of the service quality factors.

Today's modern economy is the noticeable feature for importance of Service Industry. In the management of any service organizations, providing good service quality is of great strategic importance. Having good service quality is a source of competitive advantage while poor service quality can become a cost burden to the organization and also alienates customers.

In Myanmar, there are three international airports such as Yangon International Airport (YIA), Mandalay International Airport (MIA) and Naypyitaw International Airport (NIA). Among them, YIA is the busiest gateway of international flights and air cargo transportation. Mingalardon Cargo Services Public Co., Ltd. (MCS) is export cargo terminal which was transferred from private company to public company in 2014. MCS was established to enhance the economy development in the air cargo sector by all nationalities. Similarly, Yangon Aerodrome Co., Ltd. Cargo Terminal (YACL Cargo Terminal) is an import cargo terminal under Yangon Aerodrome Co., Ltd. (YACL) which is the airport operator of Yangon International Airport. As these two companies conduct the service of export and import cargo, they own the monopoly right in air cargo operation. MCS and YACL Cargo Terminal conduct the transportation of air cargo included export cargo which are transported to abroad and import cargo which are transported from other countries. It is regarded as the important role for air cargo operation for our country.

Both service providers (MCS, YACL Cargo Terminal) need to understand the importance of how to make the customers satisfaction with a high quality service. Regardless of the size of business and whether it is product-based or service-based, to be successful depends on a high level of customer satisfaction. As customer

satisfaction strategies are proven to enhance service quality of the business, knowing how to provide customer with satisfaction is very useful to service providers to increase its competitive advantages. There are various factors affecting customers' satisfaction with a service provider. Service provided can be tangibles or intangibles. The service-related equipment, tools, room size, space, patient are considered tangible factors which can enhance customer's satisfaction with the service providers.

As the tangibles are concrete, the quality of the tangibles is easier to improve. On the contrary, it is difficult to evaluate the quality of service when taking the intangible factors into account. Due to the intangibles like personal needs and expectations are abstract, expectation of a person differs from one to another. Customers' expectations can be influenced by word of mouth, past experience, etc. Providing the best service is the best way. Service quality of service providers is assessed by five dimensions like reliability, assurance, tangibles, empathy and responsiveness. So as to see the service provider's requirement of better service the customers and what service areas need to be improved.

1.2 Objective of the Study

The objective of this study is to observe the current situation of air cargo sector in Myanmar and to assess the service quality and customer satisfaction in Mingalardon Cargo Services Public Co., Ltd. (MCS) and Yangon Aerodrome Co., Ltd. (YACL) Cargo Terminal.

1.3 Method of Study

Primary data were collected from the survey on customers such as consignors and consignees by using structured questionnaires methods. The survey was focused on a sample group of 150 respondents who took air cargo transportation process and the respondents were selected by using simple random sampling method during 1st August to 31st August, 2022 in MCS and YACL Cargo Terminal within Yangon International Airport. Secondary data were collected from Mingalardon Cargo Services Public Co., Ltd. (MCS), Yangon Aerodrome Co., Ltd. Cargo Terminal, Ground Handling Agents like MNA, MAI and YAG, Department of Civil Aviation's (DCA) Library, literature books, Research papers, Transport Journal and websites

from relevant issues. The sample size was 40 percent from overall persons of relevant entities, totally 150 respondents.

1.4 Scope and Limitations of the Study

This study is to examine the service quality of MCS and YACL Cargo Terminal that affect customer satisfaction in air cargo sector by using the service quality dimensions and conducting survey and questionnaires as data collection methods.

1.5 Organization of the Study

This study is organized into five chapters. Chapter one is presenting the introduction of the subject matter, which describes the rationale, objectives, method of the study, scope and limitations, and organization of the study. Chapter two is followed by chapter one, which presents the literature reviews. Chapter three is the overview and analysis concerned with MCS and YACL Cargo Terminal. Chapter four describes research finding based on the data available from consignors, consignees, cargo warehouses and ground handlers. Finally, suggestions and conclusion drawn from the findings are presented in chapter five.

CHAPTER II

LITERATURE REVIEW

Air transport is vital for manufactures trade, particularly trade in companies which is a major part of cross border trade today. In 2014, airlines transported 51.3 million metric tons representing more than 35 % of global trade. That is equivalent to \$ 6.8 trillion worth of goods annually, or \$ 18.6 billion worth goods every day. The value of goods carried by airlines is expected to exceed \$ 6.2 trillion in 2018, representing 7.4 % of world GDP. It will be impossible moving perishable goods from one side of the world to the other without air transport. Air transport is built upon the pharmaceutical industry for its speed and efficiency to transport the high-value, time and temperature sensitive cargo, particularly vaccines. Regarding the temperature controlled biopharmaceutical logistics, USD 13.4 billion is spent worldwide. In today's world, carriage of live animals by air is considered the most humane and expedient method of transport over long distance. As most people have personal electronic devices, a global supply chain linked by air was using.¹

2.1 History of Air Cargo

Air cargo was known as air freight in aviation industry and is the mate of transport used to transport cargo swiftly by air. Air freight is regarded as the most valuable form of transport when shipping or transporting goods in the fastest time worldwide. Air cargo can be transported through the same gateway as the passenger or commercial airlines. Any property carried or to be carried in an aircraft is regarded as air cargo. In addition, air freight, air express and airmail are comprised as Air cargo.

General cargo and special cargo are defined as two types of air cargo. High value cargo like pharmaceuticals, jewelry, and electronics are regarded as general cargo. Although air shipping is more expensive than sea transport, it is still regarded as the best mode for transporting of high margin and fragile goods. Special cargo was

¹“What to know about air cargo handling, (2022). *IATA Knowledge Hub, Airlines Magazine*.

preferred for transporting under special conditions like temperature control, air conditions, and special casing, especially for hazardous goods or livestock.²

Before aircraft was conducted for transportation, mail was moved by balloons, dirigibles and carrier pigeons. On 7th November, 1910, the first cargo moved by aircraft when transported a few bolts of silk by air from Dayton to Columbus, Ohio. The following year in 1911 experimentation with movement of post was started, and by 1914 regular air service began in the United States. In Germany, the first official air flight occurred in 1912. However, until 1925, a comprehensive airmail service was not available in the U.S. On 7th October 1925, the U.S issued the first Five Contract Airmail (CAM) routes. Postal service is to fly airmail between points. For instance, Juan Trippe, who started Pan American Airways CAM I flew the New York to Boston route. By 1931 85% of airlines revenue was from domestic airmail contracts, with 14.8% from passenger service and only 0.2% from freight. Unless postal service CAM routes, it would hamper the U.S commercial aviation section.

A rapid expansion of the aviation industry was caused by World War II and for the first time, large scale movements of freight were carried out to support the war effort. For instance, it transported the Nationalist Chinese over 650,000 tons of cargo. Later, between 1948 and 1949, the largest airlift in history to support the block added city of Berlin, Germany.

In the early 1970s door-to-door express package services came into begin. In 1969, DHL was started by Dalsey, Hillblom and Lynn. In 1971, Federal Express was started by Fred Smith. The era of wide-bodied jets started in 1970 when the first Boeing 747 entered service. In history, this was the first time that the aviation industry chose size over speed to increase performance. Soon afterwards, Douglas and Lockheed started production of three engine wide-bodied aircraft, the Douglas DC-10 and Lockheed 1011. First of all, these new wide-bodied aircraft only serviced for the passenger market until the first Boeing 747 freighter was flown between Frankfurt and New York in April 1972 by Lufthansa. The much larger wide-bodied aircraft represented an increase the volumes carried by narrow body aircraft by a factor of almost.

In 2018, the operation of 1870 freighters was conducted worldwide. Thirty-percent of these were large wide body (> 80 tons) aircraft, 33% where medium wide-

²“What types of air cargo transported by air” (2022). *IATA Knowledge Hub, Airlines Magazine*.

bodied aircraft (40 to 80 tons) and with 37% were standard bodies with carrying capacities of less than 45 tons. Boeing projects the demand for the world freighter fleet to increase to 3260 airplanes will be expected by 2037. Through new freighters and conversion of passenger airlines to cargo aircraft will meet the expected demand.³

2.1.1 Advantages of Air Cargo

There is a relationship between a product's value and its propensity to be shipped by air transportation; it is safe that relatively high-value commodities tend to go by air, despite although the cost is higher, for one or several of the following reasons.

According to the expenses, the commodities are moved into relatively small lot sizes, in order to be suitable for air transport. For instance, gold in quantities sufficient to fill a twenty-foot sea container was not bought at that time. The things less costly than gold, like electronics, precision instruments, sophisticated industrial machinery and other high-value commodities also tend to be smaller in size and weight. Certain products are extremely time sensitive. These could include a wide range of perishables, medical products, and seasonal products that most meet very specific delivery deadlines and whose production limited options other than by air.

High-value commodities, by definition, require more security from loss, damage of the fit than lower-value goods. Aircraft generally offers the fastest as well as the most secure way moving in cargo from point to point. High-value goods expand large price and impose high interest costs on their owners. As air cargo achieved the time-savings, it is worth more when high-value commodities are involved. Collectively, these value-driven factors are not work, although their impact on transport decisions depends on changing shipper perceptions of their relative importance. Moreover, other factors unrelated to commodity value increasingly influence shipper's modal selection process. To better understand each factor, and how it interacts with others, it is necessary to first explore how transportation modes are selected and recognize, in general, that shippers do not care about transportation mode. They emphasize the consignment to reach its intended destination, on time and in good condition, and the cost of the transportation.

As air cargo operations can offer the benefit of speedy and constant resupply

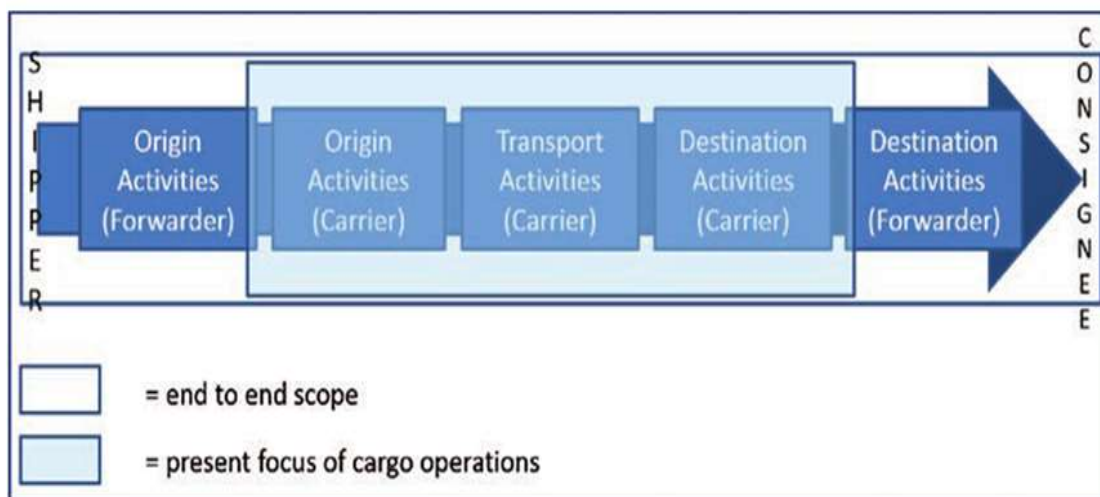
³Chapter 1, Air freight – historical perspective, industry background and key trends. pp. 6-18.

to a shipper, it can reduce the inventory levels. This element of speed allows a producer to ship select products to their customers just in time instead of having to operate large warehousing facilities.

2.2 Process and Procedure of Air Cargo Operations

Figure 2.1 describes the Master Operating Plan (MOP) which is key processes and is regarded as a sub-processes involved in transporting air cargo from shipper to consignee in a systematic and harmonized manner. It provides the air cargo supply chain, industry-endorsed, standard description of the end-to-end process in the case of transporting cargo by air.

Figure (2.1) Master Operating Plan of Air Cargo



Source: IATA Knowledge Hub

Generally, there are four stages of air cargo operation, which are cargo accepts from shipper or known consignors, cargo handling, cargo storage and cargo transport by Airlines.

2.2.1 Cargo Acceptance

The aircraft operator is only to accept cargo from a known consignor and/ or regulated agent. The consignment must be declared by an established employee or authorized representative of the known consignor or regulated agent. The employee receiving the cargo for shipment must verify that the consignment is indeed being delivered by the authorized representative or established employee an indicated in the cargo security declaration or other accompanying documents with no sign of

tampering with the consignment. The known consignor or regulated agent has provided a cargo security declaration certifying that the cargo has been cleared in accordance with their security program or another regulated agent has provided notice that the cargo has been partially cleared.

Regulated Agents receiving secured cargo should check in their country database the known consignor registration and its expiry date, check that the consignments shows no signs of tampering. Assign a security status to the consignment and enter the security information in their system and tender the consignment to the carrier accompanied by the security information either in paper or in electronic format. Regulated Agents may also receive unknown cargo or unsecured cargo; apply security controls to the consignments which may include security screening (e.g. X-ray), tender the consignment to carriers accompanied by the security information in paper or electronic format.

2.2.2 Cargo Handling

The aircraft operator will have to determine the level, if any, of security controls to be applied to any given consignment. Carry and appropriate security controls to the required level and record the details of applied security controls. Protect the consignment from unauthorized interference while it is in the aircraft operator's custody, particularly after it has been made known cargo. Ensure there is no sign of tampering ensure that all consignments have been appropriately secured before being placed on the aircraft.

During the loading of the aircraft, all loading and handling personnel have authorized security restricted area access, visibly wear their security restricted area permit at all times and prior to loading, search the cargo hold to ensure that there are no suspicious items or persons. Ensure that no unauthorized personnel have or gains access to cargo consignments on the apron or inside the aircraft. Challenge anyone not in possession of a visible valid security restricted area permit in the vicinity of an aircraft or cargo consignment.

2.2.3 Cargo Storage

Unsecured cargo which is known as unknown cargo has to be stored separately from Known cargo. Known cargo have the be kept in cages compartments, rooms or building that can be locked and protected from unauthorized entry until it is

loaded onto aircraft locked and closed. All cargo receipt and dispatch doors should capacity to be locked and closed. These doors should be armed with intrusion detection devices or other protection. Any known cargo suspected to have been compromised will be declared as unknown and security controls applied to make it known again. Another category of cargo is to be separated from other cargo will be dangerous goods. Export and import cargo are to be clearly separated. Any high value cargo is to be kept in a cage that is locked and the key is kept security. When not in use entry and exit for vehicles and personnel, it must have the capacity to be locked. And also, it was protected with intrusion detection devices or other protective measures. All cargo is to be properly labeled to allow for easy identification and retrieval. Daily audit of the warehouse is conducted to identify any authorized, tampered or suspect cargo. Personnel doors should be designed and located to ensure that entry and exit of personnel can be controlled. These doors must be the capability of being locked and secured when not in use.

2.2.4 Cargo Transportation

All vehicles used in the transportation of cargo are kept locked/ sealed and secured when not in use. The keys to the vehicles are kept secure and key issue book maintained. Although its export schedule, no cargo is left on board the vehicle. It is important not to leave unattended the vehicle, especially when loaded or during the transportation process. The vehicle while transporting cargo is kept locked/ sealed. All drivers are not allowed to deviate from their journey, including stopping for meals or to visit rest rooms during the move to the airport. Vehicles do not transport any unauthorized cargo or persons, except cargo that has been designated and the authorized representative or established employer of the known consignor or regulated agent. The cargo is suspected to have been compromised during the transportation phase, then the known cargo will be declared as “unknown” and security controls are applied to make it known again before loading onto the aircraft.

2.3 Types of Cargo Transported by Air

Goods are transported as air cargo over US \$6 trillion annually and accounting for approximately 35% of world trade by value. During the COVID-19 pandemic, one-third of airlines’ revenue was represented by air cargo. Recently, October 2021 data for global air cargo markets showing that air cargo demand is not just recovering from the COVID-

19 crisis was released by the International Air Transport Association (IATA). In October 2019, it is growing with demand up over 9.4%.

However, the lack of cargo space resulting from the grounding of the majority of passenger aircraft was remained as a problem. The choice of air transport for certain products is defined by two main factors such as the value of commodities and the speed with which they must be transported. Radiopharmaceuticals for medical diagnosis or treatment which is regarded as urgent materials, high-value goods such as technological products and high value commodities are typically shipped by air cargo. Air transport is also ultimate for some food products such as fresh fish, exotic fruits and cut flowers. The transport of pharmaceutical and healthcare products has been resulted as growth in demand.

Although the same aircraft very often carried passengers and cargo together, these are two distinctly different businesses each with its own requirements and unique challenges for an airline. There are two main groups for the various types of cargo transported by air such as General Cargo and Special Cargo. Special Cargo can be divided into smaller specialized sub-groups.

2.3.1 General Cargo

General cargo is items that are not regarded as the Special Cargo categories and that do not require any additional precautions or special handling during the air transport.

The items of these types are retail and most consumer goods (with the exception of mobile phones, tablets and laptops), dry goods, hardware, textiles and so on. Generally, everyday objects and most of those are regarded as the general cargo.

2.3.2 Special Cargo

Things get a little more complicated are special cargo. Special cargo is goods which may have specific requirements including packaging, labeling, making documentation and handling through the transport chain for their nature, weight, dimensions and/or value. Regarding the transportation of these goods, it must follow the specific regulations when preparing, offering, accepting and handling this cargo. It is included items like dangerous goods, live animals, perishable cargo, wet cargo, timed and temperature sensitive products among others. As there are globally harmonized standards to ensure the safe and facilitates of these products, IATA

established three Boards such as the Dangerous Goods Board (DGB), Time and Temperature Working Group (TTWG), and the Live Animals and Perishables Board (LAPB). The standards and guidance related to the transport of these products are managed by these Boards.

2.3.3 Shipping Dangerous Goods

The IATA Dangerous Goods Regulations (DGR) manual is the manual which was regarded as the global reference for shipping dangerous goods by air and the only standard recognized by airlines. It provides which is required to classify, prepare, accept and handle dangerous goods shipments in compliance with the international air transport regulations. IATA has published the DGR for over 60 years. The DGR is published annually to get the most up-to-date information regarding the shipping of dangerous goods. In the development of these regulations, IATA works closely with governments, other industry associations and the International Civil Aviation Organization (ICAO). IATA provides the regulations for the transport of dangerous goods by air are effective, efficient and internationally accepted to facilitate their transport.

2.3.4 Limitations for Shipping Dangerous Goods

Some dangerous goods are too dangerous for transport by air though except under very detailed allowance by the civil aviation authority, many dangerous goods can only be transported on cargo-only aircraft. But, others can be transported on both cargo and passenger aircraft. Although the dangerous goods are shipped by different types of aircraft, it is always required to follow the specific requirements. Regarding the limitations for shipping dangerous goods, any substance which is likely to explode, dangerously react, produce a flame or dangerous evolution of heat or dangerous emission of toxic, corrosive or flammable gases or vapors under conditions normally encountered in transport must not be carried on aircraft under any circumstance, per the IATA DGR. And also, it is never acceptable to ship.

Some materials that may only be carried under very particular circumstances are also considered as Dangerous Goods Forbidden Unless Exempted, other everyday items such as battery-powered devices, breathing apparatus, and dental apparatus which may not seem outwardly dangerous but they are required to be checked for hazardous components. For these reasons, it is important that passenger check-in,

cargo reservation, sales, and passenger reservation staff are provided with appropriate information so that they are well-informed and well-trained on what are dangerous goods.

2.4 Key Players and Shipments of Air Cargo

The consignors or shippers, the freight forwarders, ground handlers, aircraft operators, and consignees or receivers are main components of cargo operation.

2.4.1 Key players of Air Cargo Operation

The originator of the cargo is known as the consignor (shipper). This is the first link to the cargo supply chain. The supply chain of cargo starts when the goods are prepared for carriage or when the goods become identifiable as air cargo. The Freight Forwarder is a person or company engaged in the business of storing and dispatching shipments on behalf of other firms or individuals and of handling the formalities involved with such shipments. Subcontracted by freight forwarders and/ or aircraft operators do not have their own warehouses but they are responsible for operational aspects of cargo handling at the airport. The application of security measures applies based on the owned program or in the name of aircraft operator. Air transport provider for cargo who is responsible for carrying cargo from point A to point B which in safe and secure conditions. It is required to link by the contract of transport for cargo the Airway Bill. The person or entity at the final destination for the cargo is intended to company travelling as a passenger on the flight.

2.4.2 Types of Shipments

Cargo shipments can be classified into many types, there are individual consignment, consolidation consignment, transshipment, unaccompanied courier items, postal mail, diplomatic mail, company material (Co-mat), and unaccompanied baggage carried as cargo.

Individual consignment is produce by a manufacture/ supplier that requires carriage by air to reach its intended destination or consignee. It also does not require special handling. Consolidation consignment means shipments of air cargo comprise normal freight from more than one consignor/ shipper. The individual or organization that handles such freight is called consolidators. Transshipment is a shipment that has already been transported by air from its point of origin to the freight forwarder/

aircraft operator who will subsequently send the shipment on to another flight

Unaccompanied courier items are shipments received by freight forwarder/ aircraft operators from companies who collect items from other people and undertake to deliver them at their final destination, without a representative of the courier company travelling as a passenger on the flight. Postal mails are items or shipments tendered by and intended for delivery to state regulated/ controlled postal services destined for carriage by air and distribution in accordance with the rules of the Universal Postal Union (UPU). Diplomatic mail is shipments and items that are sent from state representatives/ embassies/ consulates for official purposes where the recipient is their nation state.

Company materials (Co-Mat) are shipments or materials sent by an aircraft on their own aircraft, for their own use of the destination of those shipment or materials. Unaccompanied Baggage carried as cargo is personal effects sent by the shipper for any reason where they will not be travelling on the same aircraft with its owner. An example of this is when someone has been posted to another country for work. They usually send their personal items to that country in advance of their arriving. These personal items that they are sending ahead of them will go under this category of cargo.

2.5 Service Quality

Kotler, Philip and L. K. Kevin (2006)⁴ stated that service is the process aimed at meeting customer expectation, which is fundamentally based on the direct or indirect interaction of the customer and the supplier. The result of the service typically is regarded as an intangible form.

The air freight business market has played a critical role in foreign economic development over the past few years, and excellent service quality is a significant factor in enhancing industrial productivity. Therefore, in a world full of intense competition, how to win market share has turned out to be a crucial problem in the industry. Since benefit, cost savings and market share were strongly integrated by delivering good service quality; service quality was the core driver of a profitable business in goods' repeat buying intentions. Providing the service quality to customers is a competitive advantage. Thus Parasuraman et al. (1985)⁵ came up with

⁴Kotler, Philip and L. K. Kevin (2006) *Marketing Management*, 12th edition, Prentice Hall, New Dali.

⁵Parasuraman, A., V. A. Zeithaml, and L. L. Berry,(1985) *Journal of Marketing*, Vol. 49, 4, pp. 41-50.

their service quality model to measure the five criteria of service: reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/ knowing the customer, and tangibles. These criteria are then simplified into five dimensions:

- (1) **Reliability:** the willingness to carry out the promised operation accurately and appropriately.
- (2) **Assurance:** employee understanding and kindness and ability to cultivate client confidence and trust. (including courtesy, competence, credibility and security)
- (3) **Tangibles:** physical equipment, infrastructure and efficiency of employees.
- (4) **Empathy:** the company offers personalized service and assistance of its customers. (including access, communication, understanding the customer)
- (5) **Responsiveness:** willingness to serve customers and provide timely assistance.

2.5.1 Customer Satisfaction

Customer satisfaction was important since customer loyalty and profitability are closely related. Customer satisfaction reports are constructive and cost-effective. Having more consumer means that the business remains successful against its rivals. Satisfaction is a huge cause for an important in income as happy customers come back for another transaction. Increased customer loyalty help business to enhance their market system or product quality. The satisfied customers are the indicator of how a business' goods and services match or satisfy consumers' demands. It can be described as the degree to which the perceived output of the commodity meets the expectations of the purchaser. Satisfied customers would return after the product and service first satisfaction them throughout their presence. The customers spread the word by telling their quality about the product or service that impressed them with aggregation and long- term customer loyalty. Therefore, more business spends more resources to nurture and sustain customer loyalty by raising their number of satisfied customers.

2.5.2 Service Quality and Customer Satisfaction

The understanding of service quality and customer satisfaction has been contributed as two distinct constructs by several researchers. Either the effect of service quality or the effect of satisfaction on behavioral intentions was mostly considered by earlier researchers. These studies potentially overstate the importance of one or both of the variables in the development of behavioral intentions and, therefore, confuse the antecedent role of service quality and satisfaction. It is viewed the perceptions of service quality and customer satisfaction as attitudinal constructs. It is considered that service quality in the marketing literature as a cognitive process.

The word “satisfaction”, the most appropriate label for the range of attitudes and feelings hold about customers’ experiences with an organization. “The overall attitude regarding a good or a service after acquisition and use is defined as customers’ satisfaction” by Oliver (1991). Resulting from a specific purchase selection and the experience of using or consuming is a post-choice evaluative judgment. “Satisfaction is person’s feelings of pleasure or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to his or her expectations.” is defined as customer satisfaction by (Oliver, R. 1991, 199) Philip Kotler. (Kotler, P. 1997, 40) CSM customer satisfaction measurement is totally focused on measuring customers’ attitudes about how satisfied they feel with the organization.

Satisfaction in service environment is an affective state that results from the cognitive process as well as the affective process, and the outside communications. Regarding the relative roles of these two constructs, there isn’t a convergent view. (Bitner, 1990; Mohar & Bitner, 1995) stated that one view considers customer satisfaction to be an independent construct affecting customer behavior, while another considers customer satisfaction is to be a determinant of service quality. However, more empirical support and acceptance in the recent services marketing literature have been received by the customer satisfaction of a mediating variable in the service quality, customer satisfaction, behavioral intentions framework.

From 2000s, service quality and customer satisfaction are normally accepted as two very closely related by researchers and sometimes even identified concepts. Assessing the quality of a service, customer satisfaction is a key factor. When it is difficult to define the quality of service, it is even harder to determine the level of customer satisfaction. Some researchers argue that service quality is the predecessor

of customer satisfaction. It can also be assumed that customer satisfaction is led by the quality of service. In maintaining long- term and successful business relationships, it is recognized that both of these elements like service quality and customer satisfaction as the major decisive factors.

In the current business environment, both logistics service quality and customer satisfaction are especially important for the relationship between the service provider and the client. One of the most significant elements in service market is the support and development of relationship with the customer. Providing a service in line with the requirement of customers' satisfaction by a logistics service provider is important for the relationship to be long- term.

While carrying out the activities, which show the actions and deeds are concentrated on customers is important for logistics companies. The customers comprise the aim of the company's activity i.e., it focuses on the fact that no service users and customers depend on the company is indicated by the customers' satisfaction. Customer satisfaction becomes the key element company's focus on to seek to promote repeated business relationships and increase long-term profitability. It is dangerous to be a non-customer-oriented company in the current competitive environment. Most of the companies are competitive for providing high-quality services that would make customers satisfied and loyal. It also should be considered that logistics service companies should know their customers to have more opportunities to make right decisions on the needs of the client by allowing companies to develop new services which provide real value to customers and to assess quantitatively the values desired by customers.

It generally defines customer satisfaction as a customer assessment in terms of whether the service meets the customer's needs and expectations. It is noted that the differences of each client's expectations is important. It may depend on the personal interests, the environment, area, and the type of business in which those expectations are formed. Therefore, companies' flexible and adaptable ability of companies may help to be advantageous over other business entities. Examining logistics services, flexibility can be regarded as a particularly important aspect. Flexibility in logistics is the possibility of a company to quickly and effectively respond to the changing needs of the client.

Many scholars paid attention to services particularly in general and service quality. The quality of service which is difficult to define and measure as well is raised as a high interest among scientists and researchers by quality of service. Quality of service focus on the fact can be defined as the meeting of customer's needs and expectations. It is interpreted as a difference of terms of service provision and customers' expectations of perceived service. When the expectations of customers are higher than the result of the service process, the customer will not satisfied on the service quality.

As lead indicators, customers' attitudes provide by far the most useful data for managing organizational performance. Customers' behaviors especially their loyalty behaviors, are extremely important to companies, but they have already happened. By service, the opportunities have been missed. That is not to say that customer behaviors should not be monitored. Information such as customer defection rates, average spent and complaints are all extremely useful measures of organizational performance, but they reflect what has already happened in the past. The main purpose of customer satisfaction measurement is providing information on how to improve in the future.

2.5.3 Factors Affecting Customers' Expectation

The key factors influencing customers' view on service include word of mouth, personal needs, customers' past experience, and external communication. Word of mouth is particularly important because when customers are satisfied or dissatisfied with the service, they are likely to share it with their friends.⁶ Service is generally classified as intangible. Customers cannot actually "see" the service until they experience it. Before making a purchase, customers need to find out as much information as possible so as to make a good decision. Word of mouth is a means to make a customer feel interested or uninterested in the service. Personal needs are considered another important factor. They deal with the motives that determine the nature and strength of what a customer expects from a service. Meanwhile, past experience refers to what customers have learned through their personal interaction with a service provider.

⁶ Parasuraman, A., V. A. Zeithaml, and L.L. Berry, 1994. "*Journal of Marketing*, Vol. 58, pp. 111-124.

It is particularly important in shaping customers' expectations. The last factor is external communication comprising such as direct sale and advertisement in order to communicate and position service through messages which can influence customer perceptions. Each factor can individually or harmoniously affect customers' purchasing decision. Customer satisfaction is a key to business success. In order to make customers satisfied, a company needs to understand their expectations and perception by studying the factors that affect their purchasing decision.

2.6 Service Quality Research within the Air Cargo Sector

According to the relevant literature on the service quality of air freight, air cargo carriers or air cargo logistic providers were focused most. For instance, Wang (2007)⁷ who was the former discussed the improvement in service quality for the air cargo sector of China Airlines. Three service quality dimensions with 20 service requirement attributes (SRAs) to measure the service quality of air cargo carriers were identified by this paper. Professionalism, physical service and correctness and positivity were regarded as the three dimensions. According to the result, China Airlines needs to improve the top 3 SRAs such as prompt handling of import/export work, willingness to help solve customer service and standard operating procedures. Hsu, Li, Patty, and Mark (2009)⁸ examined the factor affecting firm's selection of air carriers. According to the article, there are extracted six factors like product characteristics, values, inventory cost, shipping charges, shipping distance and time. As the results, the shipping charge is focused on by the shippers with high product value and short delivery distance and it prefers choosing the air cargo carrier that offers more flights.

The competitiveness of air cargo express services was evaluated. Cheng and Yeh (2007)⁹ investigated the relationship between core competencies and sustainable competitive advantage for air-cargo forwarders. To measure the competitiveness of air cargo express, the study proposed six service constructs with 26 SRAs. There are six dimensions such as Promptness, Accuracy, Safety, Convenience, Economic efficiency and Dependability. The result showed Accuracy and Promptness are the

⁷Wang, R. T., (2007). *Journal of Air Transport Management*, 13(4), 221-228.

⁸Hsu, C. J., Li, H. C., Patty, L., & Mark, M. H. (2009), *Journal of Air Transport Management*, 15(4), 330-336.

⁹Cheng, Y. H., & Yeh, C. Y. (2007). *Transportation Journal*, 46(3), 15-21.

two most influential factors to the competitiveness air cargo expressed carriers. Regarding the air cargo logistic providers, the relationship between core competencies and sustainable competitive advantage for air-cargo forwarders was investigated. The core competencies were defined as three adaptable such as resources, Capabilities and logistics services. As the Resources, it proposed nine attributes and extracted three dimensions like corporate scale and information equipment, relationship with clients, upstream and downstream partners, and corporate reputation and past delivery quality. As the capabilities, it proposed ten attributes and extracted three dimensions such as staff capability to provide service, comprehensive management system and marketing capability and multiple flight selection and price reduction capability.

Regarding the logistics services, it proposed 19 attributes and extracted six dimensions such as logistic information, customer delivery service, transportation quality and quantity, upstream and downstream partner integration, providing integrated logistic service and flexible price and prompt response to quoting. According to the results, capabilities are the most essential internal variable influencing the sustainable competitive advantage and also the staff capability to provide service is the critical factor. Regarding the air logistics service providers, the demand choices of high-technology industry was examined. Regarding the paper proposed 15 SRAs from shippers' perspectives; there are four constructs such as service cost, service performance, value- added services and perceived capability. As the results, the shippers pay most attention to service performance, followed by service cost and value- added services.

Meng, Liang, Lin, and Che (2010)¹⁰ investigated the effects of logistics services on customer satisfaction with air cargo logistics providers. The effects of logistics services on customer satisfaction with air cargo logistic providers were investigated. According to the study, five dimensions with 23 SRAs assessed logistic services, named as delivery value, knowledge innovation value, service value-added, information value and performance satisfaction value. And four constructs with 22 satisfactory indexes termed as reliability, agility, customization and flexibility verified customer satisfaction. According to the result, service value-added is the most significant factor affecting customer satisfaction.

¹⁰Meng, S. M., Liang, G. S., Lin, K., & Che, S. Y. (2010). *Journal of Air Transport Management*, 16(5), 284-286.

¹¹Tsai, M. C., Wen, C. H., & Chen, C. S. (2007). *Industrial Marketing Management*, 36(5), 617-626.

Tsai, Wen, and Chen (2007)¹¹ examined the demand choice of high-technology industry for air logistics service providers. The competition of air logistics providers in high-technology manufacturers was explored. The study proposed five constructs with 15 SRAs to evaluate the competitiveness of air cargo logistics providers, which were termed as: service cost, delivery, response, information service and perceived capability. The most significant factor affecting the competitiveness of air logistics providers is the results which indicated delivery.

There are several research papers concerned with service quality of air cargo sector. Among that, the first one is “Service Quality and Customer Satisfaction in Freight and Forwarding Industries in Uganda (A Case Study of Ken Freight Uganda Limited)” by Wilfred Okurut Omoding (2018)¹². This study investigated the relationship between service quality and customer satisfaction in freight and forwarding industry using a case of Ken Freight Uganda Limited. The study was guided by the following objectives: to assess the relationship between staff competence and customer satisfaction, to examine the relationship between service credibility and customer satisfaction and to assess the relationship of service reliability and customer satisfaction. A case study design was used for a sample size of 128 respondents’ selected using simple and purposive random technique. Findings indicated a significant positive relationship between staff and competence and customer satisfaction. It is regarded that service reliability has a positive relationship on customer satisfaction. There is a significant positive relationship for service credibility concerned with customer satisfaction. It was concluded that service quality has a significant positive relationship on customer satisfaction in Ken Freight Uganda Limited. The study recommended that freight and forwarding organization in Uganda should ensure that they continuously improve staff competence and service reliability for customer satisfaction to improve consistently.

The second paper is “Customer Satisfaction with Less than Container Load Cargo Service in HoChiMin City, Vietnam” by Ha Nam Khanh GIAO, Nguyen Thi Anh THY, Bui Nhat VUONG, Tran Ngoc TU, Pham Quang VINH and Le Thi Phuong LIEN (2020)¹³. Identifying factors are regarded as the objectives of this

¹²Wilfred Okurut Omoding, (2018). MBA Thesis of Uganda Management Institute.

¹³Ha Nam Khanh GIAO, et al. (2020). *Journal of Asian Finance, Economics and Business* Vol. 7, pp 333-344.

research that affect customer satisfaction with less than container load (LCL), cargo services of logistics companies in HoChiMin City, measuring the level of impact of the factors, testing the difference in satisfaction among groups of customers with different characteristics in terms of type of business and time of using LCL cargo services, and proposing some management implications to improve the quality of LCL cargo services. Researcher interviewed 210 customers analyze the reliability, and then exploratory factor analysis and multiple linear regression analysis were used. The result identified the six factors that influence positively customer satisfaction of LCL cargo services of logistics companies in HCMC, by decreasing importance: service process, image, resource, price, management, and outcomes. According to the result, there is no difference in customer satisfaction with LCL cargo services by types of business and time of using services. The research suggests some implication for the management of logistics companies in HCMC to enhance customer satisfaction.

The third paper is “The Effect of Service Quality and Brand Image in the Air Cargo Industry on Customer Satisfaction and Loyalty of PT Garuda Indonesia (Persero) Tbk” by Terang Maharani and Sari Wahyuni (2021)¹⁴. This research aimed to see the effect of service quality and brand image on customer loyalty directly and indirectly with the mediation of customer satisfaction. This study was analyzed the relationship between the variables. It contributes to both managerial and theoretical customer behavior through empirical data research based on surveys distributed to 118 freight forwarders in the Jabodetabek region, who cooperate with Garuda Indonesia Cargo.

2.7 Reviews on Previous Studies

Ma Ei Mon Kha, EMPA-9 Batch (2012)¹⁵ studied service quality in the thesis “A Study on Service Quality of Myanmar Airways”. It aimed at exploring passengers’ satisfaction on service quality in the airline business and examining the connection of their satisfaction with their demographic profiles. The highest satisfaction level was placed on the assurance dimension, followed by empathy, tangibles, responsiveness and reliability. The results of the survey indicated that out of the five dimensions,

¹⁴ Terang Maharani, Sari Wahyuni, (2021). *Advances in Economics and Management Research*, Vol. 11, pp 71-83.

¹⁵ Ei Mon Kha, (2012). (EMPA) Thesis, Department of Applied Economics, YUEco

assurance was rated at the highest level followed by empathy. In addition, passengers rated their highest satisfaction with the assurance dimension which included cabin crew's job knowledge, their courtesy, and confidence in their service ability and safety while traveling. Particularly, the safety and security features have been the most concerns of airline passengers and so most customers rated their highest satisfaction with the assurance dimension.

Ma Kyi Kyi Oo, EMPA-11 Batch, (2015)¹⁶ who studied service quality of airline business "A Study on Passenger Satisfaction of Airline Business". It aimed at exploring passengers' satisfaction on service quality in the airline business and examining the connection of their satisfaction with their demographic profiles. The results showed that passengers were moderately satisfied with MAI's service in all five dimensions. The highest level of passengers' satisfaction was placed on the tangibility dimension, followed by reliability, responsiveness, empathy and assurance. Moreover, most of the attributes form tangibility about the modern clean in-flight equipment, variety and quality of in-flight meals, neat appearance of crew etc.

Hui S. Huang (2015)¹⁷ who studied "Evaluating the Service Requirements of Combination Air Cargo Carriers". The purpose is to assess the service requirements of combination air cargo carriers (CACCs). It is based on the CACC's operational features and relevant literatures; the service requirement attributes (SRAs) of CACCs were investigated. It proposed a gap index based on Fuzzy AHP to evaluate the perceived differences toward those SRAs between CACC users and CACC operators. Regarding the results, indicate CACC users pay much attention to SRAs like perfect cargo delivery, adequate shipping spaces, accurate cargo delivery and staff's professional knowledge.

Hui S. Huang (2016)¹⁸ who also studied "An Assessment of Knowledge Gap in Service Quality for Air Freight Carriers". This study aims at assessing the knowledge gap in service quality for air freight carriers. In this study, based on the relevant literature and the operational features of air freight carriers, the service requirement attributes (SRAs) for air freight were first investigated. It proposed a Knowledge Gap Model (KGM) which was based on a fuzzy analytic hierarchy

¹⁶ Kyi Kyi Oo, (2015). (EMPA) Thesis, Department of Applied Economics, YUEco.

¹⁷ Hui S. Huang et al. (2015). *Asia Pacific Management Review*. Vol. 21, pp 1-8.

¹⁸ Hui S. Huang et al. (2016). *Transport Policy*, Vol. 50, pp 87-94.

process (AHP) approach to evaluate the perceived gap on those SRAs between air freight carriers and their customers (air freight forwarders). According to the results, cargo delivery perfectly, information system supports and adequate shipping spaces were regarded as the top SRAs with higher gaps. It also provides practical information for air freight carriers to improve service quality.

CHAPTER III

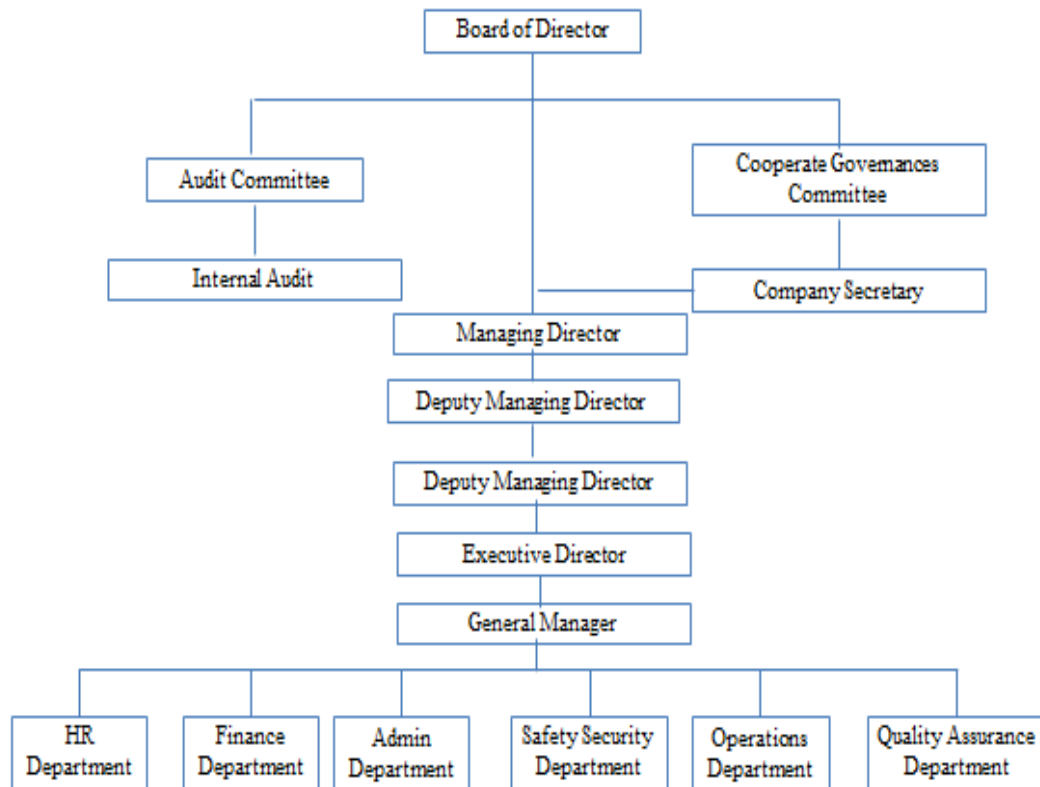
OVERVIEW OF MCS AND YAACL CARGO TERMINAL

There are three international airports and thirty domestic airports in Myanmar. Currently, Myanmar National Airlines (MNA) and Myanmar Airways International (MAI) are serving international flights. Four domestic airlines which are Air KBZ, Air Thanlwin, Man Yadanarpon Airlines and Golden Myanmar Airways (GMA) are conducting local flights within domestic airports. Moreover, forty one international airlines fly to and from Myanmar. Among three international airports, Yangon International Airport is the main gateway for international passengers and cargo transportation. Usually, international airlines carry not only passengers but also air cargo together. Air cargo transportation plays the key role in Yangon International Airport than any other international airports. The two service providers such as Mingalardon Cargo Service Public Co., Ltd. (MCS), performs the export service and YAACL Cargo Terminal also provides the import cargo service.

3.1 Mingalardon Cargo Services Public Co., Ltd. (MCS)

Mingalardon Cargo Services Public Co., Ltd. (MCS) started the export cargo operation in 2012. There are about 210 persons serve in Mingalardon Cargo Services Public Co., Ltd. (MCS) whom are divided into three shifts system. The Figure (3.1) shows the organization chart of MCS which includes board of directors (BOD), managing director, and deputy managing director, executive director, managers and operational level. Generally, it includes HR, finance, administration, safety and security, operations and quality assurance departments.

Figure (3.1) Organization Chart of MCS



Source: MCS

Currently 32 Airlines are getting cargo 40 to 50 percent of their capacity. And total market per year is around 25,000 Tons. In peak season, the export cargo terminal Mingalardon Cargo Services Co., Ltd (MCS) is usually congested. There is no adequate space for offloaded cargo and pre-shipment cargo. The handling charges and storage charges are extremely high and MCS is getting monopoly power for all cargo terminal handling. But they only can do outgoing cargo service and providing 5% loyalty fees to Myanmar National Airlines.

All outgoing cargo are accepted systematically but only 4 hours ahead before departure and cargo check in closing time is 2 hours ahead before departure. Even MCS is getting monopoly power; they try to get best service and also taking care in Human Resources. They accept and answer the several audits from all airlines and Authorities, and try to meet all requirements. Even MCS is holding monopoly power and expensive handling charges; MCS is getting ISO certificates and always trying to provide better service to their customers. But they have quite big barriers to handle incoming cargo and also transshipment because of YACL, their competitor. MCS is

collecting 0.04 USD/Kg from Carriers and 70 MMK per Kg from Shippers for the same outgoing cargo terminal service. Even though the handling charges is unsatisfactory for customers, Warehouse facilities, security and safety systems are tremendously improved compare with the previous handling of Myanmar National Airlines. Cargo warehouse security system is improving tremendously and watching cargo warehouse by 33 CCTV and it can reduce quite a lot of pilferage, lost and damage cases up to satisfactory stage. The details of MCS' equipment list and warehouse size, cold storage, strong room for valuable cargo and dangerous goods storage area express in Appendix III.

Forwarders and Shippers wants to send their cargo to acceptance area and also do not want to settle 70 MMK per Kg for terminal charges. The table 3.1 shows the rate of terminal charges which is collected from shippers. The storage charges for off loaded cargo and pre shipment cargo is also very high as per the table (3.1).

Table (3.1) Terminal Charges of MCS

No.	Particulars	Rates (MMK/ Kg)
1.	General Cargo	70
	Minimum	2,000
2.	Valuable Cargo	100
	Minimum	30,000
3.	Perishable Cargo	70
	Minimum	2,000
4.	Human Remains	300
5.	Ashes per shipment	30,000
6.	Dangerous Goods	100
	Minimum	10,000
7.	Express Cargo	100
	Minimum	15,000
8.	Live Stock	100
	Minimum	15,000

Source: MCS

According to the above table (3.1), it can divide into eight types of cargo for terminal charges. The charges for general cargo and perishable cargo are same rates for one kilogram (70 Kyat). Valuable cargo, dangerous goods, express cargo and livestock are 100 Kyats per one kilogram. The charges for human remain is the highest rate and it is charged 300 Kyats for 1 kg. There are differences for the rate of minimum volume for each type of cargo. Minimum means the amount of minimum volume of air cargo which is charged.

Table (3.2) Types of Cargo and Rates of their Storage Charge

No.	Types of Cargo, Period	Rates (MMK/ Kg)
1.	General Cargo	
	First 2 days will be charged as 1 day only	15
	3 rd day, per kg., per day	30
	4 th day, per kg., per day	60
	5 th day, per kg., per day	120
	6 th day, per kg., per day	240
	Minimum	5,000
2.	Valuable Cargo Per kg, (per day/24 hr.)	40
	Minimum	30,000
3.	Cold room Cargo	100
	Minimum	75,000
4.	Dangerous Goods Per kg, (per day/24 hr.)	40
	Minimum	5,000

Source: MCS

This above table (3.2) mentions that the storage charges for four types of cargo which can be classified by general cargo, valuable cargo, cold room cargo and dangerous goods. There are differences within the types of cargo for storage period and the rate of minimum volume for each type of cargo.

According to the table (3.3), the volume of export cargo is about 754 tons in 2012. From the year 2013 to 2015, the volume of cargo increased gradually and from the year of 2016 to 2019, increased the volume of cargo significantly. It becomes reduction in 2019 and 2020 according to the impact of COVID-19 pandemic. The

types of commodities which include seafood, garment, jade/ pearls, aircraft parts, DHL, betel leaf, mail and others are the main exported cargo from Myanmar.

Table (3.3) Types of Commodities Export by MCS

Years	Types of Commodities (Ton)								Total (Ton)
	Sea- food	Garment	Jade/ Pearls	A/C Parts	DHL	Betel Leaf	Others	Mail/ EMS/ Dipouch	
2012	506.923	104.109	30.070	7.429	5.957	-	93.206	6.854	754.548
2013	5,326.747	6,130.690	281.033	60.415	193.494	-	1,173.634	284.497	13,450.510
2014	4,706.023	7,648.057	97.079	53.451	210.796	-	1,079.372	344.113	14,138.891
2015	2,945.193	8,025.983	68.503	59.716	265.320	-	1,453.995	399.149	13,217.859
2016	3,619.411	10,315.743	94.477	60.548	318.817	1,367.917	2,213.814	483.171	18,473.898
2017	4,204.352	16,097.093	134.185	49.273	340.136	1,424.507	3,345.258	453.836	26,048.640
2018	3,018.152	15,525.427	70.742	74.664	395.805	321.121	3,266.212	371.227	23,043.350
2019	2,309.776	14,565.105	43.526	60.963	476.336	141.544	3,919.990	346.097	21,863.337
2020	1,569.111	4,902.850	1.639	23.953	147.292	71.351	2,367.520	322.296	9,406.012
2021	12,947.455	2,827.252	2.462	17.290	292.810	42.290	5,061.238	223.897	21,414.694
Total	41152.87	86,142.219	823.716	467.702	2,646.76	3,368.73	23,974.239	3,235.137	161,811.739
%	25.43%	53.24%	0.51%	0.29%	1.64%	2.08%	14.82%	1.99%	100%

Source: MCS

According to the volume of export cargo from 2012 to 2021 concerned with types of commodities, it was found that the volume of garment is the highest one, followed by seafood, others, betel leaf, mails, DHL, Jade/Pearls and aircraft parts. In 2020, the main export cargo like garment and seafood export was reduced significantly by the impact of COVID-19 pandemic. However, it was obviously found that the export of seafood was increased with the high rate.

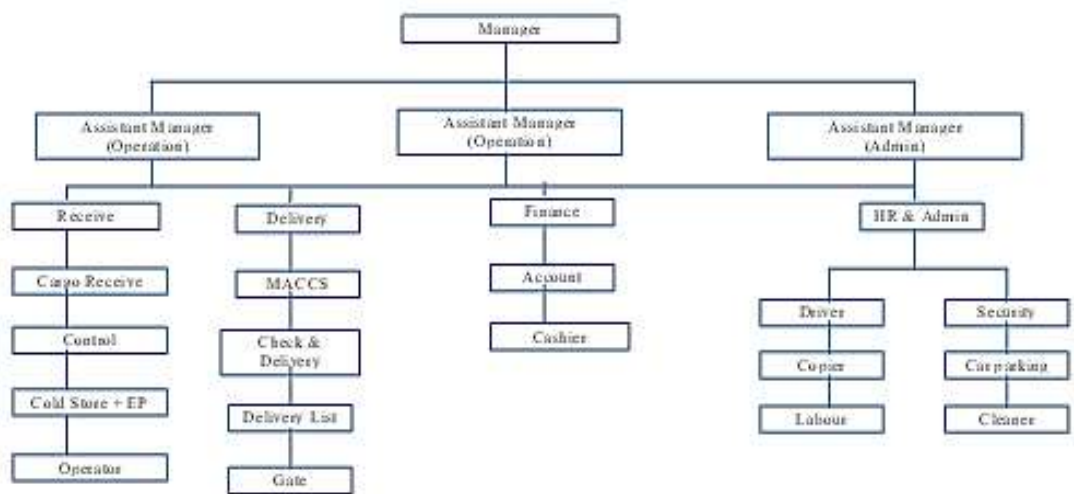
The volume of export cargo transported by MCS can be describe such as garment (53.24%), seafood (25.43%), others (14.82%), betel leaf (2.08%), mail, EMS (1.99%), DHL (1.64%), Jade, Pearls (0.51%) and A/C parts (0.29%) from 2012 to 2021.

3.2 YACL Cargo Terminal

There are about 130 staffs and operators serve at YACL Cargo Terminal. They are divided into two shifts (1 day duty, 1 day off system). The following Figure (3.2)

detailed express the organization chart of YACL Cargo Terminal. According to the chart, YACL cargo terminal is governed by manager and assistance managers. It includes two operation divisions and one HR and Administration division.

Figure (3.2) Organization Chart of YACL Cargo Terminal



Source: YACL Cargo Terminal

Import Cargo handling is only handled by YACL Cargo Terminal with effective from October 2016. Yangon Aerodrome Co., Ltd. (YACL) is an airport operator, getting monopoly power for import cargo and also getting import cargo handling rights from Customs. Import cargo volume is around 28,000 tons per year and higher than the export cargo volume. Currently, MCS has facing the difficulty to keep export cargo in warehouse. As of MCS, YACL keep export cargoes pallets approved by Department of Customs with fair prices stating from 25th October 2017. Their desire is to handle export cargo and transshipment cargo. But the problem is market size. If MCS and YACL are competing in the market, both parties cannot survive.

At present, YACL's handling charges is collected from Consignee only. Warehouse facilities, security and safety systems are tremendously improved compare with the previous handling of Customs. Cargo warehouse security system is improving tremendously and watching cargo warehouse by 127 CCTV and it can reduce quite a lot of pilferage, lost and damage cases up to satisfactory stage. The equipment lists of YACL Cargo Terminal and warehouse size, cold storage, strong room for valuable cargo and dangerous goods storage area can be seen as appendix IV.

Table (3.4) also expresses the rate sheet of import cargo warehouse charges. YACL Cargo Terminal collects the terminal charges by weight and volume of the shipment, and period such as 1 to 10 days, 11 to 20 days and 21 to 30 days.

Table (3.4) Import Rate Sheet of YACL Cargo Terminal

Weight (Kg)	Volume (Cubic ft)	1 to 10 days	11 to 20 days	21 to 30 days	Over 30 days (per each 10 days)
		(Prices in MMK)			
1 to 10	1 to 5	500	1,300	2,500	+ 1,000
11 to 20	6 to 10	1,250	3,250	6,250	+ 2,500
21 to 30	11 to 20	2,500	6,500	12,500	+ 5,000
31 to 40	21 to 40	4,250	11,050	21,250	+ 8,500
41 to 60	41 to 70	7,650	19,890	38,250	+ 15,300
61 to 80	71 to 100	12,250	31,850	61,250	+ 24,500
Over 81	Over 100	15,000	39,000	75,000	+ 30,000

Source: YACL Cargo Terminal

Table (3.5) shows the cold storage warehouse charges. It is higher than the normal rate of charges and it also defines the rate of charges by weight, volume and period like as normal cargo storage.

Table (3.5) Cold Storage Warehouse Charges

Weight (Kg)	Volume (Cubic ft)	1 to 5 days	6 to 10 days	11 to 20 days	21 to 30 days	Over 30 days (per each 10 days)
		(Prices in MMK)				
1 to 10	1 to 5	1,000	2,500	4,000	5,500	+ 3,000
11 to 20	6 to 10	2,500	6,250	10,000	13,750	+ 6,500
21 to 30	11 to 20	5,000	12,500	20,000	27,500	+ 13,500
31 to 40	21 to 40	8,000	20,000	32,000	44,000	+ 22,000
41 to 60	41 to 70	14,000	35,000	56,000	77,000	+ 34,000
61 to 80	71 to 100	21,500	51,250	82,000	112,000	+ 55,000
81 to 500	101 to 150	26,000	65,000	104,000	143,000	+ 70,000
Over 500	Over 150	+ 20 per Kg per day				

Source: YACL Cargo Terminal

YACL Cargo Terminal served the import cargo from 2016 to up to now. Table (3.6) shows the yearly import cargo as mail and freight which includes medicine, garments, CMP, electronic, pharmacy, DHL and others. According to the following table, the volume of import cargo increased gradually from the year 2016 to 2019, and in the year of 2020, the volume of import cargo decreased significantly because of the impact of COVID-19 pandemic.

Table (3.6) Yearly Import Cargos by YACL Cargo Terminal

No.	Years	Freight	Mail	Total	Remarks
1.	2016	21,026.154	302.760	21,328.914	
2.	2017	29,898.362	220.596	30,118.958	
3.	2018	29,607.107	308.676	29,915.783	
4.	2019	30,091.759	341.039	30,432.798	
5.	2020	18,359.435	69.856	18,429.291	COVID-19 Pandemic
6.	2021	21,368.980	11.399	21,380.379	COVID-19 Pandemic

Source: YACL Cargo Terminal

Table (3.7) describes the export and import cargo from January to July, 2022. It was found that the export cargo was about 2900 tons per month and the import cargo was about 1600 tons per month on average. Similarly, the percentage of export cargo was 66.58% and the percentage of import cargo was 33.42% on average.

Table (3.7) Monthly Exports and Import Cargo in 2022

No.	Month	Export Cargo	Export %	Import Cargo	Import %	Total (Ton)
1.	January	3,085.800	62.97%	1,814.791	37.03%	4,900.591
2.	February	2,546.399	71.03%	1,038.715	28.97%	3,585.114
3.	March	2,880.143	60.22%	1,902.699	39.78%	4,782.842
4.	April	2,498.538	61.33%	1,575.434	38.67%	4,073.972
5.	May	3,265.861	62.65%	1,946.865	37.35%	5,212.726
6.	June	3,074.104	61.57%	1,848.525	38.43%	4,922.629
7.	July	2,362.715	86.29%	1,418.274	13.71%	3,780.989

Source: MCS and YACL Cargo Terminal

3.3 Transshipment

Transshipment in YIA is still in dreaming stage because of the requirement of push and pulls factors. The country is definitely required to provide transshipment service to step up to the hub stage. Even though the location of the country is supporting to be a hub, lack of R&D, infrastructure and institutions such as procedures, regulations, facilities and organizations, the country cannot mobilize to a hub stage. The requirements for transshipments are only infrastructure for multi modal transport hub (free trade zone, dry port and bonded stores, regulated agent permits or licenses and insurance liability), government approval, regulations, procedures, and safety and security systems. The market requirement is depending on price and service. The benefits of the transshipments are as follow:

- (1) Get handling and storage charges,
- (2) More employment and poverty reduction,
- (3) Supporting the carrier's air operational cost. Cause of this, the air routes for the country can be sustained,
- (4) Faster trade flows and higher logistics competency,
- (5) Push factor for the hub situation, and
- (6) Acceleration of E- Commerce.

3.4 Ground Handlers in Yangon International Airport

There are three groundling agents in Yangon International Airport which provide the international airlines for passengers and cargo handling. They are Myanmar National Airlines (MNA), Myanmar Airways International (MAI) and Yangon Airport Group (YAG).

3.4.1 Ground Handling Agent (MNA)

Myanmar National Airlines (MNA) is the national flag carrier of Myanmar with 17 fleets and has the most extensive route network within our country. MNA has been in existence for over 70 years and one of the oldest airlines in Asia. Currently, MNA also operating ground handling services in YIA and handling 10 international airlines with 963manpower. Among them, there are 30 people serve at air cargo section under the MNA ground handling department. MNA contracted with 10 international airlines, among these international airlines, Qatar Airways and Spice Jet which are pure freight carriers.

3.4.2 Ground Handling Agent (MAI)

Myanmar Airways International (MAI) had a long history of government run international air travel when MAI was founded in 1993 as a joint venture company between Myanmar Airways and Singapore base company. Effective from January 2014, MAI is the 100% complete member of KBZ Group. It is Myanmar national owned private company only operating to international routes with 4 fleets. MAI have passed the IATA Operational Safety Audit Program (IOSA) Operator. MAI also contracted with 16 International Airlines to provide ground handling services at YIA, but there are 11 international airlines still fly in current.

3.4.3 Ground Handling Agent (YAG)

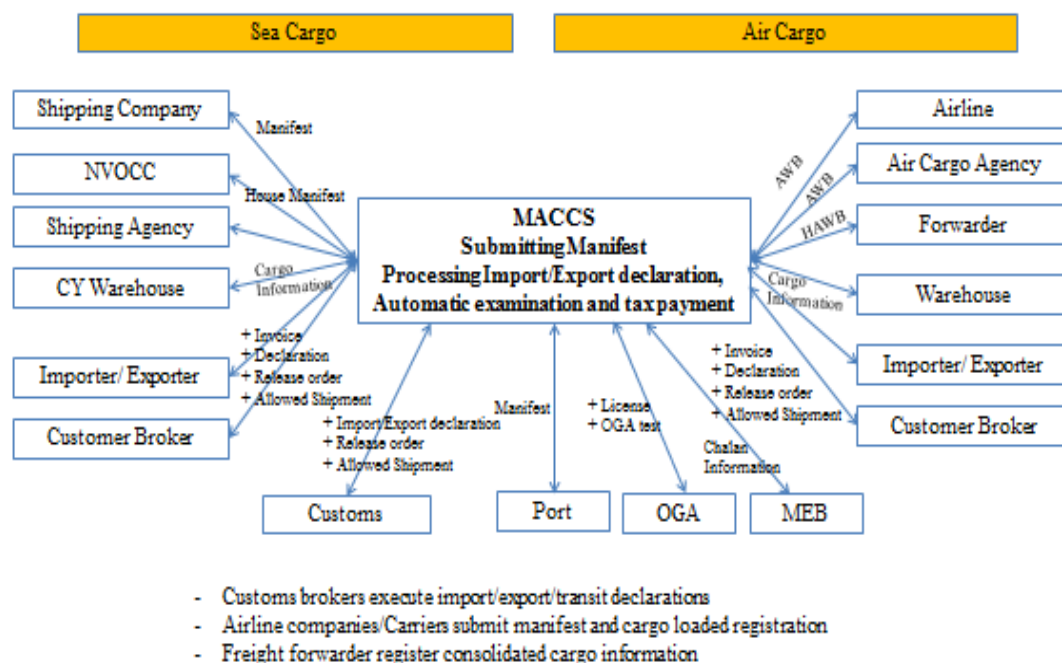
Yangon Airport Group (YAG) provides ground handling services by 100% private own ground handler same with MCS in YIA and handling 15 international airline. In the past, Government aimed to assist Air Bagan Airlines but now Air Bagan Airlines is not operated and getting big net profit. The Lists of International Airlines handled by MNA, MAI and YAG was attached as appendix V. The ground handling agents use the proper equipment to handle air cargo and to provide the service for passengers. The cargo equipment List of MNA, MAI and YAG are mentioned in appendix VI.

3.5 Cargo Automation System

Myanmar Automatic Cargo Clearance System (MACCS) has been established in 12th Nov 2016 as an ODA of Japan Government JICA. MACCS aims to easily to apply for export and import declarations. Cause of the MACCS, Customs clearance costs and time is substantially going down and enhancing the export cargo volume year by year. It provided reference service of cargo information database. MACCS users can confirm cargo status in real time and any time.

MACCS users can re-use the cargo information registered at upstream process when users make import/ export declaration. These processes prevent miss-input by re-input and keep accuracy of information. MACCS can manage cargo movement such as carry-in and carry-out to customs area. Customs can strengthen cargo enforcement by the above and are expected prevent disappearance of cargo (smuggling) and enable to link import/ export declaration with cargo in customs area. Main players of Customs as follow in figure (3.3).

Figure (3.3) Main Players of MACCS



Source: Customs Departments

3.6 Domestic Air Cargo Industry

In Myanmar, there are 69 airports in total and 32 are currently in use. Moreover, there are also 3 international airports like Yangon International Airport (YIA), Mandalay International Airport (MIA) and Nay Pyi Taw International Airport (NIA). It is regarded that there is a rapid growth in the Myanmar domestic air sector. At present, there are 11 local licensed airlines offering domestic services. Myanmar National Airlines (MNA) is the major domestic flight with 13 planes, Air KBZ with eight aircrafts as from April, 2014; additional domestic carrier includes Air Mandalay, Yangon Airways and Mann Yadanarbon Airlines which have 16 airplanes in total. The year between 2014-2015 and 2015-2016, a dramatic increase of freight transport from 2,460 ton-miles to 9,694 ton-miles according to the expansion of transport routes by the airlines.

Myanmar Statistical Year Book Foreign investment in aviation sector has been permitted under joint venture agreements. The Foreign Investment Law (FIL) and Notification 49 (August 2014) issued by the Myanmar Investment Commission (MIC) render a significant policy change for encouraging foreign investment in many industries (including the aviation industry) of the country. Under the Foreign

Investment Law, domestic and international air transport services can be conducted via a joint venture operation with a Myanmar private entity or government agency. It is required that corporation in Myanmar and permission from MIC. In Myanmar aviation sector, infrastructure has been developed. According to the quick expansion of air transport, substantial new aviation infrastructure will be an important role in near future, the privatization and the upgrades to major international airports have undertaken in the country, as announced by the aviation authorities.

In 2014, Pioneer Aerodrome Co., Ltd. which is a consortium led by an affiliate of Asia World Co., Ltd. upgraded Yangon International Airport by using US\$150 million. The first phase opened on 12 March 2016. And also Yangon's existing international terminal had been advanced as Terminal 2 by Asia World Co., Ltd. In November 2014, a Japanese company called MC-Jalux Airport Service Co., Ltd signed a concession agreement with the DCA at a cost of \$ 100 million for the upgrade of Mandalay International Airport in the northern logistic hub, expected to create direct transportation of cargos to other countries in Asia and Europe. Logistics Hubs Yangon and Mandalay, the main economic capitals of the country, are the logistics hubs of Myanmar domestic air transport. Yangon is regarded as the first hub of domestic air transport.

For the cargo from Yangon, the main destinations are defined such as Mandalay Region (Mandalay, Nyaung U, Naypyitaw), Tanintharyi Region (Dawei, Myeik, Kawthaung), Sagaing Region (Homalin, Kalay), Shan State (Lasio, Heho, Tachileik, Keng Tung), Rakhine State (Kyaukphyu, Sittwe, Thandwe), Kayah State (Loikaw), Mon State (Mawlamyine), and Kachin State (Myitkyina, Putao). For domestic air cargo transport, there are no planes which load purely for cargoes. All planes are passenger cum cargo planes. Myanmar National Airlines is the only airline which has an exclusive department to facilitate cargo while other airlines accept cargo only through the same airport counters for passengers.

The International Airport of Yangon has two terminals; the old terminal is used mainly used for domestic flights while the new terminal is for international flights. The special features of the airport include integrated check-in system, automated baggage handling system, four air bridges, able to handle four Boeing 747s and two stories car park with wide enough space over 300 vehicles. Mingalardon Cargo Services has cargo handling equipment and facilities. The service of labeling, export and import cargo handling, plastic stretch wrapping of pallets and cargo are

conducted by cargo terminal. There is also a customs warehouse (i.e. customs-bonded warehouse) where cargo can be stored up to two weeks.

CHAPTER IV

ANALYSIS SERVICE QUALITY OF SERVICE PROVIDERS

4.1 Survey Profile

There are one hundred and fifty respondents which were collected the data. Among them, seventy-five respondents are consignors who export the cargo to Mingalardon Cargo Services Public Co., Ltd. (MCS) and seventy-five respondents are consignees who import the cargo from Yangon Aerodrome Co., Ltd. Cargo Terminal (YACL Cargo Terminal) within four weeks. The data were collected by respondents like consignors and consignees (agents, buyers, representatives, forwarders and shippers). Only one type of questionnaire was used for data collection. The questionnaire was used for customers such as consignors and consignees. This questionnaire was divided into two parts. The first part was about the respondents' socio-demographic profile since consumers' needs, preferences and personalization are often associated with demographic factors. Seven socio-demographic characteristics related to air cargo operation, consisting of gender, age, education, type of business, monthly income, types of cargo, and cargo export/ import frequency were socio-demographic issues of the survey.

The second part of questionnaire comprised questions about customers' satisfaction with the service of service providers during the cargo operation process. This part of questionnaire was based on the service quality for measuring customers' satisfaction in five dimensions of service: reliability, assurance, tangibles, empathy and responsiveness.

4.2 Data Analysis

The data acquired from the questionnaires were analyzed in two sections: socio-demographic profile, level of customers' satisfaction with cargo operation service and the relationship between socio-demographic profile and customers' satisfaction based on Likert scale. The five points Likert scales were used to rate the level of satisfaction as shown in table below.

The following table indicates the interpretation of the scales:

Table (4.1) Intervals of Satisfaction Level

Rating Scale	Level of Agreement / Disagreement	Satisfaction Level	Means Score
5	Strongly agree	Excellent	4.51- 5.00
4	Agree	Good	3.51- 4.50
3	Uncertain	Average	2.51- 3.50
2	Disagree	Fair	1.51- 2.50
1	Strongly disagree	Poor	1.00-1.50

Source: Poonlarbrawee, K, 1987, Statistics for Research

The criteria and meaning of the ranking scale are interpreted as follows: rating of 4.51 to 5.00 reflects the highest level of customers' satisfaction (Excellent), 3.51 to 4.50 reflects high level of customers' satisfaction (Good), 2.51 to 3.50 reflects average level of customers' satisfaction (Average), 1.51 to 2.50 reflects low level of customers' satisfaction (Fair), and 1.00 to 1.50 reflects the lowest level of customers' satisfaction (Poor).

This survey picked up percentage and means score of each service quality dimension to present the relationship between the participants socio-demographic profile and their satisfaction. The results were presented in terms of percentages and mean scores in the form of tables and a bar chart. These fundamental statistic methods were proper in this study because percentages and mean scores are considered the basic statistics used for data analysis and presentation. Also, the general public can easily understand the interpretation of the data.

4.3 Socio-demographic Characteristics of the Respondents

The socio-demographic data of respondents in terms of gender, age, education level, types of business, income, types of cargo and frequency were constructed and finding will be discussed as follows.

Table (4.2) Socio-demographic Characteristics Distribution of the Respondents

No.	Socio-demographic Characteristics	Total (n=150)	
		Number	Percentage
1.	Gender		
	Male	88	58.57%
	Female	62	41.33%
2.	Age		
	21-20 Years Old	40	26.67%
	31-40 Years Old	73	48.67%
	41-50 Years Old	25	16.66%
	51-60 Years Old	12	8.00%
3.	Education Level		
	Middle School	11	7.33%
	High School	34	22.67%
	Graduate	79	52.67%
	Post Graduate	26	17.33%
4.	Types of Business		
	Agent	78	52.00%
	Buyer	31	20.66%
	Consignee	8	5.33%
	Representatives	10	6.67%
	Forwarder	16	10.67%
	Shipper	7	4.67%
5.	Monthly Income		
	Up to 300,000 Kyats	34	22.67%
	300,000 – 400,000 Kyats	29	19.33%
	400,000 – 500,000 Kyats	33	22.00%
	500,000 - 600,000 Kyats	33	22.00%
	600,000 – 700,000 Kyats	10	6.67%
	700,000 Kyats above	11	7.33%

**Table (4.2) Socio-demographic Characteristics Distribution of the Respondents
(Continued)**

No.	Socio-demographic Characteristics	Total (n=150)	
		Number	Percentage
6.	Types of Cargo		
	Seafood	21	14.00%
	Garment	32	21.34%
	Jade/ Pearls	4	2.67%
	Medicine	10	6.66%
	Electronic	12	8.00%
	Others	71	47.33%
7.	Frequency of Export/ Import		
	Under 5 Times	13	8.67%
	6-10 Times	16	10.67%
	11-15 Times	15	10.00%
	16-20 Times	40	26.66%
	21-25 Times	24	16.00%
	26 Times and above	42	28.00%

Source: Survey Data, 2022

Regarding the 150 respondents, 88 of respondents are male and it describes 58.67% and 62 of respondents are female and it describes 41.33% according to the gender. Regarding the age group, 21-30 years old is the youngest customers and 51-60 years old is the oldest one. The highest number of the customers was 31 to 40 years old is 73, it means 48.67% of all respondents, 21-30 years old is 40 (26.67%), 41-50 years old is 25 (16.66%) and 8.00% were the lowest number of the respondents by 51-60 years old is 12.

In terms of educational status, middle school level is the lowest and post graduate level is the highest one. The highest number of the graduate level respondents is 79, it describes 52.67%, followed by high school level is 34 (22.67%), post graduate level is 26 (17.33%), and the lowest number was middle school level is 11 (7.33%) respectively.

In terms of types of business, the highest number of the respondents was agent and the lowest number of the respondent was shipper. There were 78 agent who are the highest number of all respondents, it means 52%, followed by 31 buyers (20.66%), 16 forwarders (10.67%), 10 representatives (6.67%), 8 consignees (5.33%), and 7 shippers (4.67%) respectively. Representative means that he/ she regulates the cargo export or import process who is the person delegated by owners.

According to their monthly income, the respondent earned 700,000 Kyats and above is the highest level and up to 300,000 Kyats is the lowest one. The highest number of the respondents was 34 people who earned up to 300,000 Kyats (22.67%), followed by 33 respondents with a monthly income of 400,000-500,000 Kyats (22%) and 500,000-600,000 Kyats (22%) each, 29 respondents with a monthly income of 300,000- 400,000 Kyat per month is 19.33%, 11 respondents with a monthly income of 700,000 Kyats and above is 7.33%, and 10 respondents with a monthly income of 600,000 - 700,000 Kyats is the lowest number (6.67%) respectively.

Regarding the types of cargo, the highest number of the respondents is 71 people who export/ import the other cargo. The lowest number of respondents is only 4 people who export jade/ pearls. According to the types of cargo transportation, the highest number is 71 respondents who transported the others (47.33%), followed by those 32 respondents import and export the garments (21.34%), 21 respondents transported seafood (14.00%), 12 people import electronic device (8%), 10 people import the medicine (6.66%), and only 4 respondents export jade/ pearls is 2.67% respectively. Other cargo means that dangerous goods, valuable items, aircraft parts, betel leaves and specific items such as food and clothes for personal use.

The last socio-demographic data derives from the frequency in cargo exporting/ importing with cargo terminal. Regarding the frequency of export/ import cargo within one month, the highest frequency was 26 times and above and the lowest frequency was under 5 times. According to the survey data, 42 respondents was the highest frequency (28%), followed by 40 respondents exported/ imported 16-20 times (26.66%), 24 respondents exported/ imported 21-25 times (16%), 16 respondents exported/ imported 6-10 times (10.67%), 14 respondents exported/ imported 11-15 times (10%), 13 respondents indicated that they exported/ imported under 5 times (8.67%) during the one month.

In conclusion, the socio-demographic data shown in the tables above indicated that there were 88 male and 62 female from all 150 respondents. The age group of the

majority number of the participants ranged from 31-40 years (48.67%). Most of them educational level was graduate level (52.67%), agent was 52% concerns with types of business. The highest number of customers' monthly income was up to 300,000 Kyats (22.67%). Other cargo exporting/ importing was highest number (47.33%), and frequency of export/ import cargo was 26 times and above (28.00%) during one month.

Similarly, the lowest number of the respondents was 51 to 60 years old (8%) in age group. Only 7.33% of the respondents were middle school level in educational level and 4.67% of the respondents were shippers in types of business. The lowest number of the respondents earned 600,000-700,000 Kyats was 6.67% as monthly income. The respondent exported Jade/ Pearls were only 2.67% is the lowest one and the respondents exported/ imported under 5 times during one month was 8.67% respectively.

4.4 Customers Satisfaction on Service Quality of MCS and YACL Cargo Terminal

There are 35 questionnaires in survey which included 5 questionnaires for reliability and assurance each, 7 questionnaires for tangibles, empathy and responsiveness equally and only 4 questionnaires for customers' satisfaction.

Table (4.3) Customers' Satisfaction on Reliability

No.	Reliability	Means	SD
1.	The satisfaction of process of cargo accepting and issuing by cargo terminals.	3.01	0.98
2.	The service providers support their services at the time they promise to do so.	2.95	0.94
3.	When customers have a problem, the service providers show a sincere interest in solving it.	2.92	0.97
4.	The service providers insist on error-free records.	2.78	0.91
5.	When the service providers (MCS, YACL cargo terminal, Ground Handling Agents) promise to do by a certain time, they do so.	2.65	1.04
	Overall mean	2.86	0.97

Source: Survey Data, 2022

Table (4.3) describes the customers' satisfaction on service quality of service providers related to reliability dimension. It was found that the mean score of customers' satisfaction on process of cargo accepting and issuing by cargo terminals is 3.01, providing service in time is 2.95, solving the problems with sincere interest is 2.92, insistence on error-free records is 2.78, and providing service in certain time is 2.65 respectively. The reason of the high score for process of cargo accepting and issuing by cargo terminals is that cargo terminals provide the whole process of accepting and issuing cargo effectively. However, service providers have lack of cooperation of other related entities such as customs and security forces. Overall mean score on reliability dimension is 2.86 which mean customers satisfied in average level.

Table (4.4) Customers' Satisfaction on Assurance

No.	Assurance	Means	SD
1.	The customers feel safe and secure for import / export cargo.	3.06	0.94
2.	Staff of service providers is knowledgeable to answer customer cargo-related questions.	3.03	1.00
3.	Air cargo terminal personnel are experienced and well trained.	2.96	0.98
4.	The satisfaction concerned with the solving of lost and damage cargo.	2.95	0.96
5.	Staff of service providers is consistently courteous to customers.	2.88	1.07
	Overall mean	2.98	0.99

Source: Survey Data, 2022

Table (4.4) presents the customers' satisfaction on service quality of service providers concerning with assurance. Interestingly, the mean score of customers' satisfaction on export/ import their cargo safely and securely is 3.06, providing knowledge of cargo related questions is 3.03, experience and well training is 2.96, solving of lost and damage cargo is 2.95, and courtesy to customers is 2.88 respectively. The customers' satisfaction on export/ import their cargo safely and securely is high score for controlling and handling the cargo by well experienced operators and utilizing good quality equipment. The reason of low score for the

courtesy to customers by staff of service providers is insufficient of manpower in each unit. Overall mean score on assurance dimension is 2.98 which is customer satisfied in average level.

Table (4.5) Customers' Satisfaction on Tangibles

No.	Tangibles	Means	SD
1.	The service providers support customers with effective instructions.	3.09	1.09
2.	Documents about service are informative and appealing such as pamphlets and advertisement.	3.01	1.15
3.	The cargo terminals have enough space for cargo storage.	3.01	1.17
4.	Staff of service providers full-dressed and neat in appearance.	3.00	1.01
5.	You can trust the quality of security equipment by cargo terminals.	2.94	0.98
6.	The service providers provide customers with new, modern and well maintained equipment.	2.86	1.02
7.	The physical facilities of service providers are convenient such as toilets, canteen, bench, etc.	2.81	1.13
	Overall mean	2.96	1.08

Source: Survey Data, 2022

Table (4.5) indicates that the customers' satisfaction on service quality of service providers concerning with tangibles. Obviously, it was found that the mean score of customers' satisfaction on supporting the effective instructions is 3.09, providing informative documents and having enough space for cargo storage are 3.01 each, appearance of staff and operators is 3.00, trusted in quality of security equipment is 2.94, providing new, modern and maintained equipment is 2.86, and supporting the convenient physical facilities is 2.81 respectively. The service providers support customers with effective instructions is regarded as high score for well knowledge of each step of cargo operation. However, as low score on the physical facilities of service providers are convenient, it is required to increase the

numbers of toilet, canteen, bench, etc. Overall mean score on tangibles dimension is 2.96 which mean customer satisfied in average level.

Table (4.6) Customers’ Satisfaction on Empathy

No.	Empathy	Means	SD
1.	The personnel of service provider understand your specific needs.	2.99	1.05
2.	MCS/ YACL Cargo Terminal staffs perform the responsibilities dutifully.	2.91	1.00
3.	Personnel working for the service provider put themselves in the place of the customers when providing service.	2.91	0.98
4.	Services providers have your best interest at heart.	2.90	0.95
5.	Service providers give customers individual attention.	2.87	0.98
6.	Operators of cargo terminals provide your special needs in some cases.	2.85	1.03
7.	The service providers have convenient operating hours to all customers.	2.57	1.03
	Overall mean	2.86	1.00

Source: Survey Data, 2022

Table (4.6) illustrates the customers’ view on service quality of service providers concerning with empathy. It was found that the mean score of customers’ satisfaction on understanding customers’ specific needs is 2.99, providing performance of responsibilities dutifully and providing service by empathy are 2.91 each, providing service the best interest at heart is 2.90, offering individual attention is 2,87, supporting the special needs in some cases is 2,85 and convenient operating hours is 2,57. The customers’ satisfaction on understanding customers’ specific needs is high score for fully supported by well trained personnel. The convenient operating hours to all customers is low score for current situation and limitation of working hours. Overall mean score on empathy dimension is 2.86 which is customer satisfied in average level.

Table (4.7) Customers' Satisfaction on Responsiveness

No.	Responsiveness	Means	SD
1.	Some operators of cargo terminal explain exactly when services will be offered.	3.07	0.97
2.	The personnel of service providers give the service as timely assistance.	3.07	1.07
3.	The service providers give you effective and efficient service.	3.03	1.03
4.	The personnel of service providers are always willing to help customers.	3.03	1.07
5.	Operators of the service providers respond the customers' inquiries patiently.	2.93	1.06
6.	The service providers offer good services upon cargo operation process.	2.91	0.98
7.	Operators of the service providers provide its service for customers promptly.	2.90	0.96
	Overall mean	2.99	1.02

Source: Survey Data, 2022

Table (4.7) reveals the customers' view on service quality of service providers concerned with responsiveness. Interestingly, it was found that the mean score of customers' satisfaction on providing clear and exact information and giving the service as timely assistance are 3.07 each, providing effective and efficient service and willing to help customers are 3.03 equally, patient response the inquires of customers is 2.93, offering good services is 2.91 and prompt response is 2.90 respectively. The satisfaction of customers on providing clear and exact information and giving the service as timely assistance are regarded as high scores for completed service by staff and operators. Providing the service for customers promptly is low score for the lack of understanding the customers' requirements in some cases. Overall mean score on responsiveness dimension is 2.99 which is the customers satisfied in average level.

Table (4.8) Customers' Satisfaction on Service Quality

No.	Customers' Satisfaction	Means	SD
1.	The rate of the quality of service provided by MCS/ YACL Cargo Terminal.	3.03	1.02
2.	You desire to continue to use the service by MCS/ YACL Cargo Terminal.	3.03	1.05
3.	The behavior of air cargo terminal personnel instills confidence in customers.	2.98	1.17
4.	I make all my shipping using the service quality of service providers.	2.67	0.90
	Overall mean	2.93	1.04

Source: Survey Data, 2022

Table (4.8) presents the customers' satisfaction on service quality of service providers and desire to continue their services. It was found that the mean score of customers' satisfaction on the rate of service quality of Cargo Terminals and sustainable using of their services, confidence on behavior for customers and shipping the cargo by using the service quality of service providers. The customer rated low score on the service quality of service providers for inadequately service of ground handling agents. Overall mean score on customers' satisfaction is 2.93 which is the customers satisfied in average level.

Table (4.9) Mean Score of Service Quality

Sr.	Service Quality	Mean Score
1.	Responsiveness	2.99
2.	Assurance	2.98
3.	Tangibles	2.96
4.	Empathy	2.86
5.	Reliability	2.86

Source: Survey data, 2022

Table (4.9) shows that the overall means score of all 150 respondents' satisfaction on five dimensions of service quality ranging from the mean scores of

2.99 to 2.86. The results revealed that the most important service quality dimension for the whole sample group of customers were responsiveness (2.99), followed by assurance (2.98), tangibles (2.96), reliability and empathy (2.86) each. It is found that, the customers rate the five dimensions from 2.99 to 2.86 by mean score. It is regarded that the satisfaction of customers is in average level.

CHAPTER V

CONCLUSION

5.1 Finding

MCS exports average cargo 25,000 tons yearly from 2012 to 2021 and YACL Cargo Terminal also imports average cargo 28,000 tons per year from 2016 to 2021. It was significantly decreased export and import cargo in 2020 by the impact of COVID-19 pandemic and it was gradually increasing in 2021. Among ten years operations, 2017 can be regarded as the highest volume cargo transported by MCS. According to the data, 2017, 2018 and 2019 can be described as the highest volume cargo transported by YACL Cargo Terminal. There are exported cargo about 2800 tons per month and imported cargo about 1650 tons per month from January to July in 2022. It was obviously found that the volume of exported cargo is higher than the volume of imported cargo. At the present, export cargo service conducting by MCS and import cargo service performing by YACL Cargo Terminal own the monopoly right of cargo operation.

The result shows that all the customers' satisfaction based on the five dimensions is at the average level. The highest level of customers' satisfaction is placed on the responsiveness dimension, followed by assurance, tangibles, reliability and empathy each.

It was found that, the highest number of the respondents was 31-40 years old (48.67%) regarding the age group. In terms of educational level, the highest number of the respondents was graduated level (52.67%), and in terms of types of business, the highest number of the respondents was agent (52%). The highest number of the respondents earned up to 300,000 Kyats monthly (22.67%). Regarding the types of cargo the highest number of the respondents classified by cargo was others (47.33%), and in terms of frequency of export/ import cargo, the highest number of participants exported/ imported 26 times and above within one month (28%).

Similarly, it was regarded that the lowest number of the respondents was 51-60 years old (8%) in age group. In terms of education, the lowest number of the

respondents was middle school level (7.33%), and in terms of types of business, the lowest number of the respondents was shipper (4.67%). The lowest number of the respondents earned 600,000-700,000 Kyats monthly (6.67%). Regarding the types of cargo the lowest number of the respondent classified cargo was jade/ pearls (2.67%), and in terms of frequency of export/ import cargo, the lowest number of participants exported/ imported under 5 times within one month (8.67%).

According to the customers' satisfaction on reliability dimension, customers rated high score on the process of cargo accepting and issuing by cargo terminal and low score on promise to do by a certain time of the service providers. Regarding the customers' satisfaction on assurance dimension, it was found that safe and secure for import/ export cargo is high score. However, low mean score is consistently courteous to customers. In the customers' satisfaction on tangibles dimension, the customers rated the support customers with effective instruction is high mean score and physical facilities of service providers is low mean score.

It is regarded that high mean score of the customers' satisfaction on empathy dimension is the service providers' understanding the customers' specific needs. Low mean score is the convenient operating hours to all customers. According to the dimension of customers' satisfaction on responsiveness, the customers rated on exact explanation by cargo terminal high mean score. As low mean score, prompt response to customers by service providers is regarded. It was found that the customers rated high mean score on the quality of service provided by both cargo terminals and desire to continue their services. Shipping the cargo by using the service quality of service provider is low mean score.

The 150 respondents assess the service quality of service providers as five dimensions and the customers rated on average level. As a result, there is a little difference within responsiveness, assurance and tangibles. The rest of two dimensions like reliability and empathy are same rate but different from other three dimensions such as responsiveness, assurance and tangibles.

In summary, the customers' satisfaction level of the service quality in connection with their socio-demographic data was introduced. Six out of the seven socio-demographic characteristics: the participants' age, educational level, types of business, monthly income, type of cargo, frequency of export/ import were analyzed in connection with the five dimensions of service quality which are reliability,

assurance, tangibles, empathy and responsiveness. It was observed that there were some connection between these two matters in various ways as earlier discussed.

5.2 Suggestions

The results of the survey on customers' satisfaction indicated that out of the five dimensions, responsiveness was rated at the highest level (2.99), followed by assurance (2.98), tangibles (2.96), reliability and empathy (2.86) each. Customers rated their satisfaction on high level with the responsiveness dimension by operators and staff of service providers which included offering good services, the courtesy, confidence in service ability, prompt service, response the customers' inquiries patiently, effective and efficient service and willing to help customers in the process of export and import cargo. It may be because of staff and operators of service providers are well-trained prior to their actual service work in their fields respectively. This can also ensure that the customers' satisfaction. Therefore, most customers rated their satisfaction at high level with the responsiveness dimension.

Regarding the survey results, reliability and empathy dimension are regarded as low scores. This may be because of the lack of providing special needs in some cases, giving customers individual attention, providing best interest at heart, performance the responsibilities dutifully and understanding the specific needs. Similarly, service providers have lack of providing the service in timely manner, solving the problems about the cargo transportation and the process of cargo accepting and issuing by cargo terminal. The result shows that most customers had higher expectations towards the service. It was possible that they had more tendencies to be dissatisfied with the service failures. All service providers are required to correct the deficiencies and to improve their services better than before.

Respondents rated high score on cargo accepting and issuing process, and low score on providing service in certain time concerned with each questionnaire of reliability dimension. In assurance dimension, respondents rated high score on export/import their cargo safely and securely, and low score on courtesy to customers. Respondents rated high score on supporting the effective instructions, and low score on supporting the convenient physical facilities concerned with each questionnaire of tangibles dimension. In empathy dimension, respondents rated high score on understanding customers' specific needs, and low score on convenient operating hours. Respondents rated high score on providing clear and exact information and

response for customers, and low score on prompt response to customers. Therefore, the cargo terminal should understand the customers' specific needs, enhance and fulfill the customers' requirements to meet the customers' satisfaction.

The service provider still needs to listen to the voice of all customers, even if the number of the sample group was few, every customer is valuable for the service providers. Also, it would be valuable to implement a relevant strategy to expand this group of customers since they had a positive attitude for the service providers.

In conclusion, this survey found both strengths and weaknesses in service providers' service quality. Responsiveness was found as high satisfaction in the participants' opinion. The service providers must maintain the service quality with a focus on this dimension. On the other hand, empathy and reliability dimensions were at low satisfaction level among the five dimensions. The service providers should improve its service quality on these two dimensions, especially with regards to the service providers' individual attentions for customers and providing modern and well maintained equipment service to retain its customers.

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APPENDIX I

Master Table for Means of SERVQUAL Scores for 35 Questions from Customers' Views.

No.	Statements	N	Min;	Max;	Mean
1.	When the service providers (MCS, YACL cargo terminal, Ground Handling Agents) promise to do by a certain time, they do so.	150	5	3	2.56
2.	When customers have a problem, the service providers show a sincere interest in solving it.	150	1	3	2.82
3.	The service providers insist on error-free records.	150	5	3	2.74
4.	The service providers support their services at the time they promise to do so.	150	5	3	2.90
5.	The satisfaction of process of cargo accepting and issuing by cargo terminals.	150	1	3	2.91
6.	The customers feel safe and secure for import / export cargo.	150	5	3	3.01
7.	Staff of service providers is consistently courteous to customers.	150	5	3	2.78
8.	Staff of service providers is knowledgeable to answer customers cargo-related questions.	150	1	3	2.90
9.	The satisfaction concerned with the solving of lost and damage cargo.	150	1	3	2.83
10.	Air cargo terminal personnel are experienced and well trained.	150	5	3	2.89
11.	The service providers provide customers with new, modern and well maintained equipment.	150	5	3	2.78
12.	The physical facilities of service providers are convenient such as toilets, canteen, bench, etc.	150	5	3	2.76
13.	Staff of service providers full-dressed and neat in appearance.	150	1	3	2.90
14.	Documents about service are informative and appealing such as pamphlets and advertisement.	150	1	3	2.83
15.	You can trust the quality of security equipment by cargo terminals.	150	5	3	2.90

No.	Statements	N	Min;	Max;	Mean
16.	The cargo terminals have enough space for cargo storage.	150	1	4	2.85
17.	The service providers support customers with effective instructions.	150	1	3	2.90
18.	The service providers have convenient operating hours to all customers.	150	5	2	2.54
19.	Operators of cargo terminals provide your special needs in some cases.	150	5	3	2.79
20.	Service providers give customers individual attention.	150	5	2	2.82
21.	Services providers have your best interest at heart.	150	5	3	2.86
22.	MCS/ YACL Cargo Terminal staffs perform the responsibilities dutifully.	150	5	3	2.86
23.	Personnel working for the service provider put themselves in the place of the customers when providing service.	150	5	3	2.86
24.	The personnel of service provider understand your specific needs.	150	1	3	2.85
25.	The service providers offer good services upon cargo operation process.	150	5	3	2.86
26.	Some operators of cargo terminal explain exactly when services will be offered.	150	1	3	2.99
27.	The personnel of service providers give the service as timely assistance.	150	5	3	2.95
28.	Operators of the service providers provide its service for customers promptly.	150	5	3	2.85
29.	Operators of the service providers respond the customers' inquiries patiently.	150	5	3	2.85
30.	The service providers give you effective and efficient service.	150	1	3	2.88
31.	The personnel of service providers are always willing to help customers.	150	1	3	2.88
32.	The rate of the quality of service provided by MCS/ YACL Cargo Terminal.	150	1	3	2.93

No.	Statements	N	Min;	Max;	Mean
33.	You desire to continue to use the service by MCS/ YACL Cargo Terminal.	150	1	3	2.93
34.	I make all my shipping using the service quality of service providers.	150	5	2	2.67
35.	The behavior of air cargo terminal personnel instills confidence in customers.	150	1	2	2.83

APPENDIX II

QUESTIONNAIRE

Dear Honorable Customers (Consignors/ Consignees)

My name is Zaw Min, an officer of Department of Civil Aviation (DCA) and master's student of public administration programme, Yangon University of Economics. This questionnaire is about a discussion of service quality gaps between service providers (MCS, YAACL Cargo Terminal, and Ground Handling Agents) and customers (consignors, consignees). Please kindly complete the questionnaire. The data gained will be kept confidential and used for the thesis only. Your kind cooperation is greatly appreciated.

.....

Direction: Please mark (√) your answer in the space provided.

Part 1: Personal Information

1. **Gender**

Male

Female

2. **Age**

21- 30 years

31-40 years

41-50 years

51- 60 years

3. **Education**

Middle School Level

High School Level

Graduate Level

Post Graduate Level

4. **Types of Business**

Agent

Buyer

Consignee

Representative

Forwarder

Shipper

5. **Monthly Income**

Up to 300,000 Kyats

300,000 -400,000 Kyats

400,000- 500,000 Kyats

500,000-600,000Kyats

600,000- 700,000 Kyats

700,000 Kyats and above

6. **Types of Cargo**

- | | |
|---------------------------------------|-----------------------------------|
| <input type="checkbox"/> Seafood | <input type="checkbox"/> Garments |
| <input type="checkbox"/> Jade/ Pearls | <input type="checkbox"/> Medicine |
| <input type="checkbox"/> Electronic | <input type="checkbox"/> Others |

7. **Frequency of export / import cargo (within one month)**

- | | |
|--|---|
| <input type="checkbox"/> Under 5 times | <input type="checkbox"/> 6-10 times |
| <input type="checkbox"/> 11-15 times | <input type="checkbox"/> 16-20 times |
| <input type="checkbox"/> 21-25 times | <input type="checkbox"/> 26 times and above |

Part 2: Your Satisfaction with MCS and YACL Cargo Terminal's Air Cargo Service

(1= Strongly Disagree, 2= Disagree, 3= Not Sure, 4= Agree, 5= Strongly Agree)

Direction: Please circle the rate your degree of agreement/ disagreement with the following statements.

A. Reliability		Satisfaction				
1.	When the service providers (MCS, YACL cargo terminal, Ground Handling Agents) promise to do by a certain time, they do so.	1	2	3	4	5
2.	When customers have a problem, the service providers show a sincere interest in solving it.	1	2	3	4	5
3.	The service providers insist on error-free records.	1	2	3	4	5
4.	The service providers support their services at the time they promise to do so.	1	2	3	4	5
5.	The satisfaction of process of cargo accepting and issuing by cargo terminals.	1	2	3	4	5

B. Assurance						
1.	The customers feel safe and secure for import / export cargo.	1	2	3	4	5
2.	Staff of service providers is consistently courteous to customers.	1	2	3	4	5
3.	Staff of service providers is knowledgeable to answer customers cargo-related questions.	1	2	3	4	5
4.	The satisfaction concerned with the solving of lost and damage cargo.	1	2	3	4	5
5.	Air cargo terminal personnel are experienced and well trained.	1	2	3	4	5

C. Tangibles						
1.	The service providers provide customers with new, modern and well maintained equipment.	1	2	3	4	5
2.	The physical facilities of service providers are convenient such as toilets, canteen, bench, etc.	1	2	3	4	5
3.	Staff of service providers full-dressed and neat in appearance.	1	2	3	4	5
4.	Documents about service are informative and appealing such as pamphlets and advertisement.	1	2	3	4	5
5.	You can trust the quality of security equipment by cargo terminals.	1	2	3	4	5
6.	The cargo terminals have enough space for cargo storage.	1	2	3	4	5
7.	The service providers support customers with effective instructions.	1	2	3	4	5

D. Empathy						
1.	The service providers have convenient operating hours to all customers.	1	2	3	4	5
2.	Operators of cargo terminals provide your special needs in some cases.	1	2	3	4	5
3.	Service providers give customers individual attention.	1	2	3	4	5
4.	Services providers have your best interest at heart.	1	2	3	4	5
5.	MCS/ YACL Cargo Terminal staffs perform the responsibilities dutifully.	1	2	3	4	5
6.	Personnel working for the service provider put themselves in the place of the customers when providing service.	1	2	3	4	5
7.	The personnel of service provider understand your specific needs.	1	2	3	4	5

E. Responsiveness						
1.	The service providers offer good services upon cargo operation process.	1	2	3	4	5
2.	Some operators of cargo terminal explain exactly when services will be offered.	1	2	3	4	5
3.	The personnel of service providers give the service as timely assistance.	1	2	3	4	5
4.	Operators of the service providers provide its service for customers promptly.	1	2	3	4	5
5.	Operators of the service providers respond the customers' inquiries patiently.	1	2	3	4	5
6.	The service providers give you effective and efficient service.	1	2	3	4	5
7.	The personnel of service providers are always willing to help customers.	1	2	3	4	5

F. Satisfaction						
1.	The rate of the quality of service provided by MCS/ YACL Cargo Terminal.	1	2	3	4	5
2.	You desire to continue to use the service by MCS/ YACL Cargo Terminal.	1	2	3	4	5
3.	I make all my shipping using the service quality of service providers.	1	2	3	4	5
4.	The behavior of air cargo terminal personnel instills confidence in customers.	1	2	3	4	5

Thank you very much for your kind cooperation.

APPENDIX III

Quantity and Performance of MCS's Cargo Equipment

No.	Machine/ Equipment	Performance and Quantity
1,	Weight Scale	500 Kg weight scale- 2 units 10000 Kg weight scale- 2 units
2.	X-Ray Machine	Rapiscan (W-1500mm x H- 1650 mm) (3000kg, evenly Distributed Load), Astrophysic (W-1500mm x H- 1700 mm) (2000kg, evenly Distributed Load)
3.	Forklift	3Ton Forklift, 4.5 Ton Forklift, 1.4 Ton Electrical Forklift (Reach Truck)

Source: MCS

Warehouse and Room Size and Capacity of MCS

No.	Title	Capacity
1.	Valuable Cargo	Width 176 cm, Height 270 cm, Total Size - (L 1019 XW 486 XH 538) CM Total Storage Capacity - 32.6 CBM
2.	Dangerous Goods	Width 180 cm, Height 295 cm, Total Size - (L 674 XW 624 XH 442) CM, Total Storage Capacity - 34 CBM
3.	Cold room and freezer	The width of entrance is 510 cm and height of entrance is 405 cm. Size - (L 553 x W 225 x H 220) cm, Door Size - (W 172 x H 197) cm Storage Capacity - 27 CBM
3.	Warehouse Size	250 CBM

Source: MCS

APPENDIX IV

Equipment of YACL Cargo Terminal

No.	Equipment	Quantity
1.	Forklift 3 Ton Forklift 3.0 Ton Forklift 1.5 Ton Forklift	1 2 2
2.	Hand Fork	8 piece
3.	Trolley	20 piece
4.	Plastic Pallet	158 piece
5.	Session Lift	2 piece

Source: YACL Cargo Terminal

Types of Cargo Room and Warehouse Size of YACL Terminal

No.	Title	Quantity
1.	Valuable Cargo Room	1 Room
2.	Dangerous Goods Room	1 Room
3.	Explosive Cargo Room	1 Room
4.	Live Animals Room	1 Room
5.	Detention Cargo Room	1 Room
6.	Radio Active Cargo Room	1 Room
7.	Cold room and freezer Room	6 Room
8.	Warehouse Size	100.440 CBM

Source: YACL Cargo Terminal

APPENDIX V

Lists of International Airlines handle by MNA, MAI and YAG

No.	Lists of International Airlines handle by		
	MNA	MAI	YAG
1.	Nok Air (DD)	Singapore Airlines (SQ)	Thai Airways International (WE)
2.	Qatar Airways (QR)	All Nippon Airways (NH)	Thai Smile (TG)
3.	Korean Air (KE)	Malaysian Airlines (MH)	Air Asia (AK)
4.	China Southern Airlines (CZ)	Malaysian Airlines (MH) (Freighter)	Air Asia (FD)
5.	China Airlines (CI)	Cathay Dragon Air (KA)	Air Asia (XJ)
6.	Air China (CA)	Jetstar Airlines (3K)	Viet Jet (VJ)
7.	China Eastern Airlines (MU)	Sichuan Airlines (3U)	Bangkok Airways (PG)
8.	Vietnam Airlines (VN)	Kuming Airlines KY)	Nine Air (AQ)
9.	Air India (AI)	Malindo Air (OD)	Thai Viet Jet (VZ)
10.	Spice Jet	Hainan Airlines (HU)	Flydubai (FZ)
11.		Xiaman Airlines (MF)	Indigo Air (6E)
12.		Emirate Airlines (EK)	Thrkish Air (TK)
13.		Biman Bangladesh Airlines (BG)	Qingdao (QW)
14.		JC Airline (DD)	Lanmei (LQ)
15.		Ruili Airline (DR)	K-Mile Air (8K)
16.		Spring Airlines (9C)	

Source: Ground Handling Agents (MNA, MAI and YAG)

APPENDIX VI

The Cargo Equipment Lists of MNA, MAI and YAG

No.	Types of Equipment	Quantity		
		MNA	MAI	YAG
1.	Baggage Tractor	14	14	-
2.	Mobile Step	5	3	-
3.	Conveyor Belt Loader	7	9	8
4.	Hi-Loader	3	-	4
5.	Tug Master (Push Back)	2	3	3
6.	Transporter	-	-	2
7.	Toilet Truck	1	-	1
8.	Water Truck	1	2	1
9.	Catering Truck	1	1	-
10.	Catering Box	3	-	-
11.	Ground Power Unit	4	5	3
12.	Air Start Unit	1	1	2
13.	Air Condition Unit	2	2	3
14.	Forklift	2	1	2
15.	Crew Bus	3	-	2
16.	Passenger Bus	8	5	2
18.	Lavatory Truck	-	2	-
19.	Main Deck Loader	-	3	-
20.	Pallet Dolly	-	58	1
20.	Container Dolly	-	25	-
21.	Container Cart	-	8	-
22.	Tow Bar	-	13	-

Source: Ground Handling Agents (MNA, MAI and YAG)