

Report On  
How a Container Shipping Company Creates Value in Supply  
Chain Management from Logistics Perspective – A Case Study on  
Mediterranean Shipping Company Bangladesh LTD

By

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An internship report submitted to the BRAC Business School in partial fulfillment of the  
requirements for the degree of  
Bachelor of Business Administration

BRAC Business School  
BRAC UNIVERSITY  
December 2019

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## **Declaration**

It is hereby declared that

1. The internship report submitted is my own original work while completing degree at BRAC UNIVERSITY.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

### **Student's Full Name & Signature:**



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Adnan Bin Monsur  
Student ID: 16304173

### **Supervisor's Full Name & Signature:**

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Md. Hasan Maksud Chowdhury  
Assistant Professor  
BRAC Business School  
BRAC UNIVERSITY

## Letter of Transmittal

December 09,2019

Md. Hasan Maksud Chowdhury

Assistant Professor

BRAC Business School

BRAC University

66 Mohakhali, Dhaka-1212

### Subject: Submission of Internship Report

Dear Sir,

This is my great pleasure to submit the Internship report on **“How a Container Shipping Company Creates Value in Supply Chain Management from Logistics Perspective – A Case Study on Mediterranean Shipping Company Bangladesh LTD”** which is the requirement for the BBA degree. I have completed the internship from MSC Mediterranean Shipping Company Bangladesh LTD.

I have tried my best to prepare an effective and credible report by implementing my academic experience in practical field as well as tried to address the major and in-depth issues to make the paper accurate and creditable. While preparing this report, I made sincere effort to study related materials, documents, observe operations performed in MSC and have tried to gather as much information as I could. However, for any sort of inconsistency, I will be pleased to clarify regarding this report.

I would like to thank you for your cooperation and hope that this report will receive your kind appreciation.

Sincerely yours,

-----

Adnan Bin Monsur

ID No: 16304173

BRAC Business School

BRAC UNIVERSITY

December 09,2019

## **Non-Disclosure Agreement**

This agreement is made and entered into by and between MSC, Mediterranean Shipping Company Bangladesh Limited and the undersigned student at BRAC University named Adnan Bin Monsur for the commitment of preventing the unauthorized disclosure of confidential information of the MSC, Mediterranean Shipping Company Bangladesh Limited.

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MSC Mediterranean Shipping Company Bangladesh Limited

.....

Adnan Bin Monsur

## **Acknowledgement**

This report is a summation on many people's endeavor. But at first, I would like to express my gratitude to almighty Allah for vesting the strength to complete this report successfully within the schedule time.

This report would not have been possible without the dedication and contributions of a number of individuals as it is involved diverse field of knowledge and experience. Hence, it will be unfair to ignore acknowledging some of them as they contributed so much.

First and foremost, I would like to express my gratitude to my honorable supervisor Md. Hasan Maksud Chowdhury, Assistant Professor, BRAC Business School, BRAC UNIVERSITY and Mr. Anisur Rahman, Senior Manager & Head of Export Customer Service & Documentation of Mediterranean Shipping Company Bangladesh Ltd for agreeing to supervise me during the internship period. Their willingness and encouragement boost my enthusiasm to prepare a credible report as well as learn something new about shipping industry. Secondly, my parents those who have given me support throughout the way both emotionally and financially.

I am also very grateful to Showvick Sir, Yasmin Mam, Shela Mam, Jathan Sir, Ovi Sir, Amdad Sir, & Humayan Sir of MSC, who have given their endless effort to guide me in the right direction during the internship period and processing of this report.

## **Executive Summary**

Value Creation is one of the inevitable parts of the supply chain process. Almost all the renowned organization emphasize on value creation. As a leading container shipping company in logistics and transportation industry; Mediterranean Shipping Company also focuses on their value creation process. The objective of this report is to find out the process of value creation from logistics perspective.

First of all, this report gives a concise idea of Containerization Business and thereafter an overview of MSC; followed by precise concept of Supply Chain Management incorporate with Logistics Management and Logistics Sector of Bangladesh.

In the fifth chapter, how a Container Shipping Company is Creating Value through numerous ways, that has been discussed in details. This study also reflects the Key Assessment and Observation of the company and industry which is a crucial chapter to understand the performance of the company.

Nevertheless, this report will serve as an important evaluation of liner business from logistics and transportation viewpoint.

**Keywords:** Supply Chain; Logistics; Transportation; Container Shipping; Documentation; Customer Service; Port.

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## List of Acronyms

SCM	Supply Chain Management
WIP	Work in Progress
MSC	Mediterranean Shipping Company
HQ	Headquarter
FFW	Freight Forwarder
NOOCC	Non-Vessel Operating Common Carrier
CFS	Container Freight Station
ICD	Inland Container Depot
ICT	Inland Container Terminal
BICDA	Bangladesh Inland Container Depot Association
EPZ	Export Processing Zone
TS	Transshipment
POR	Port of Receipt
POL	Port of Loading
POD	Port of Discharge
POD	Port of Delivery
BCO	Beneficiary Cargo Owner
OCA	Origin Controlled Account
DCA	Destination Controlled Account
BL	Bill of Lading
SI	Shipping Instruction
LC	Letter of Credit
EDI	Electronic Data Interchange

ETA	Expected Time of Arrival
ETB	Expected Time of Berthing
ETD	Expected Time of Departure
TEU	Twenty-foot Equivalent Units
HC	High Cube Container
DV	Dry Van Container
FCL	Full Container Loaded
LCL	Less Container Loaded
COC	Carrier Owned Container
SOC	Shipper Owned Container
VGM	Verified Gross Mass
SOLAS	Safety of Life at Sea
IMO	International Maritime Organization
PR	Public Relation
UNESCAP	United Nations Economic and Social Commission for Asia and Pacific
BSC	Bangladesh Shipping Corporation

# Chapter 1

## Background of the Report

### 1.1 Origin of the Report:

As an undergraduate student of BRAC Business School, BRAC UNIVERSITY; it is required to do an internship in a company for 3 months at least and prepare an academic report which may reflect the learning and the work experience of the internship phase. To fulfill this requirement, I worked as an intern in Mediterranean Shipping Company Bangladesh Ltd for 3 months. This internship not only fulfills the academic requirement but also this procedure helps me to know about a particular job sector and experience the activities. It helps me to compare the theoretical knowledge with practical experience. The purpose of this academic requirement is to get an exposure of the job sector and cope with new organizational culture before stepping into the actual profession.

### 1.2 Objective of the Report:

Supply chain and logistics management might not be a new approach in the business sector but it is quite new in Bangladesh. Specially, the connection between SCM and logistics is quite fascinating because both of the terms are interrelated and have different sub-sectors yet combinedly these two concepts are creating values for any organizations. This report will focus particularly on the process of a transportation company. Nevertheless, the core objective of this report is:

- To find how a transportation company creates value through their operation from logistics insight and delivering that value to their customer

Along with this core objective, the other associated objectives of this report are:

- Demonstrate a brief summary of supply chain and logistics management.
- Provide a glimpse of the logistics sector of Bangladesh incorporated with the shipping industry and container trade.
- Outline a concise idea of the value chain of logistics and liner business.

Combinedly, these objectives will help to find if there is any gap in the service and in the industry.

### **1.3 Statement of the Problem:**

The problem statement is that this report will enable us to understand why logistics management is important for a business and particularly why organization should rely on liner business for transportation of goods and how container shipping industry or liner business creating scope in growth of Bangladeshi economy.

### **1.4 Scope of the Report:**

The scope of this report solely depends on the company's cooperation, functions, operation and performance. Though, MSC Bangladesh Ltd is on the growth stage but they have showed exceptional consistency in their operation in Bangladesh and this company has promising future ahead. The internship was conducted at the head office.

### **1.5 Methodology:**

In order to provide a credible report, I intend to utilize the both primary and secondary data as well as theoretical framework for better understanding of some chapters of this report.

#### **1.5.1 Data Type:**

Two type of data have collected for this report:

- i. Qualitative Data
- ii. Quantitative Data

#### **1.5.2 Data Source:**

From two sources, data have collected:

- i. Primary Source: Primary data have collected through direct assigned work, interviewing some of the MSC personnel, company's public and member's website, informal discussion with employees, internal report and taking information from some of their customers.
- ii. Secondary Source: Secondary data source includes various journals, information from different websites, articles from newspaper, SCM related books, etc.

Theoretical Framework has used to described some of the chapter of this report in brief.



## **1.6 Limitations of the Report:**

It was an excellent experience to work in a multinational liner shipping company like Mediterranean Shipping Company Bangladesh Ltd which is the 2<sup>nd</sup> largest in the world. However, there are some limitations to get information in order to prepare this report. For instance:

- Limitation of time was a major drawback to prepare this report with a decent research.
- MSC is a privately-owned multinational company. Therefore, getting proper, accurate and enough information was not easy as the top management maintain very strict policy of providing information.
- Collecting information from customer was a bit difficult because I was assigned with several types of work.
- Preparing report in a short time and at the same time completing task at office was very difficult.
- Though I have assigned in several different tasks at my internship phase but I had to prepare a report on a single topic; hence, it was a bit tough to connect the necessary information and complete the report.

## **Chapter 2**

### **Introduction of the Report**

#### **2.1 Introduction:**

The liner shipping industry is a crucial sector of the global economy and is contributing significantly to world economic output. In the world trade, international shipping industry is in charge of around 90% of the carriage. The shipping industry is the life line of the global economy for this very legit reason. Liner Shipping is a process of transportation with ocean going fleet and high capacity of TEUs that travel in a systematic route with tight and fixed schedule. Liner shipping operating companies usually transport high value intermediate and consumer commodities including all containerized cargo, automobiles, heavy machineries, RMG, bulk amount of raw materials and many more.

The shipping industry has transformed into a standard process due to containerization. Over the last few decades, as a mode of transport; container shipping or liner shipping industry's efficiency has risen. It has happened because of the growth of seaborne trade which has conveyed the value and benefit to customer across the world with the support of competitive freight cost. Approximately, 60% of world seaborne commodities is accountable for container trade. This industry's efficiency and effectiveness depends on the transit time, reliability, digitalization, frequency of service and some other characteristics.

According to International Chamber of Shipping, there are more than 50,000 merchant ships which are trading and transporting every kind of cargo internationally. The world fleet is registered in over 150 nations and crewed by more than a million seafarers of every nationality. Quantity of goods carried by container has risen 1.83 billion metric tons. It consists of a variety of components with significant economic impact. As stated by World Shipping Council, the industry is directly or indirectly responsible for over 436.3 billion USD as output globally and an approximate estimated annual income is more than half of a trillion US Dollars in freight rates by the operation of merchant ships', which reflects the upcoming possibilities in liner business.

## 2.2 History and Impact of Containerization in Shipping Industry:

Container shipping is one of the most ideal methods of shipping through sea routes. In maritime operations, containerized cargo transportation gives the thrust in the economy of shipping industry. However, the idea of containerization cargo service is not so old.

The pioneer of container was Malcom McLean, an American businessman and entrepreneur. He first, on 26<sup>th</sup> of April, 1956; modified the basic structure of the World War II tanker vessel and the container was modified as wheel-less truck-carts and its maiden voyage was from Port Newark to Houston in USA (World Shipping Council, 2019). This method was effectively

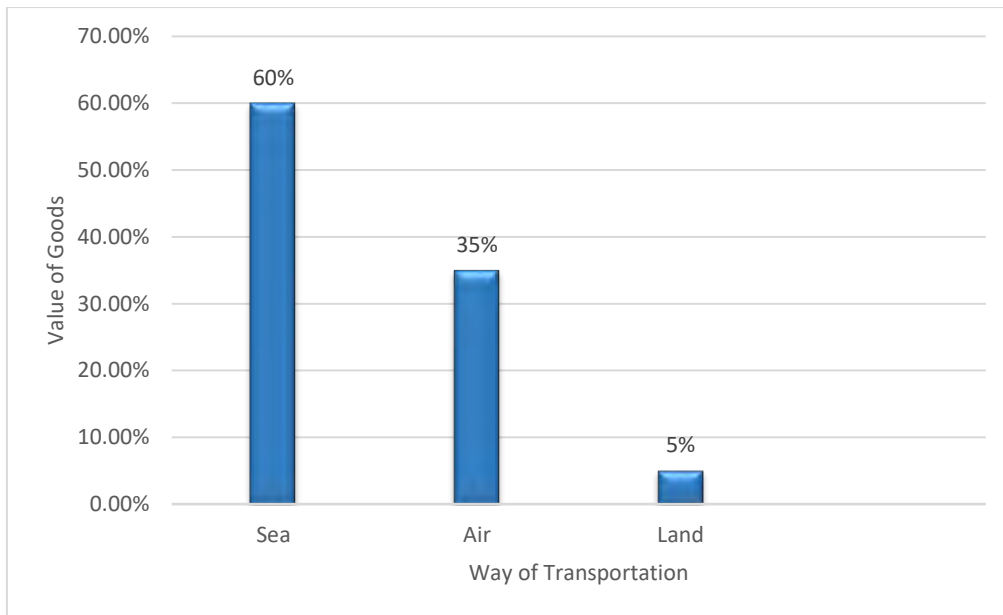
- Avoided the extreme lengthy process of loading
- Minimized the labor force
- Reduced the assembling procedure time

As it could carry bulk amount of cargo and minimize the loading/discharge procedure as well as this process also led to development of harbor facilities; other companies soon realized the potentiality of this method and gradually adopted this process. Now, total volume of containers transported being over 175 million TEU-s per year (Review of Maritime Transport, 2016).

Container shipping has number of advantages compared with other mode of transport, including:

- **Secured Handling:** Once a cargo loaded into a container, it is secured until it reaches to the destination port. Each container contains security seal and lock which cannot break easily and need equipment to break.
- **Efficient Port Operation:** Container ship can be loaded and unloaded with specialized cranes and other terminal equipment which saves time and lower the operational cost.
- **Shipping Time:** It reduces shipping time

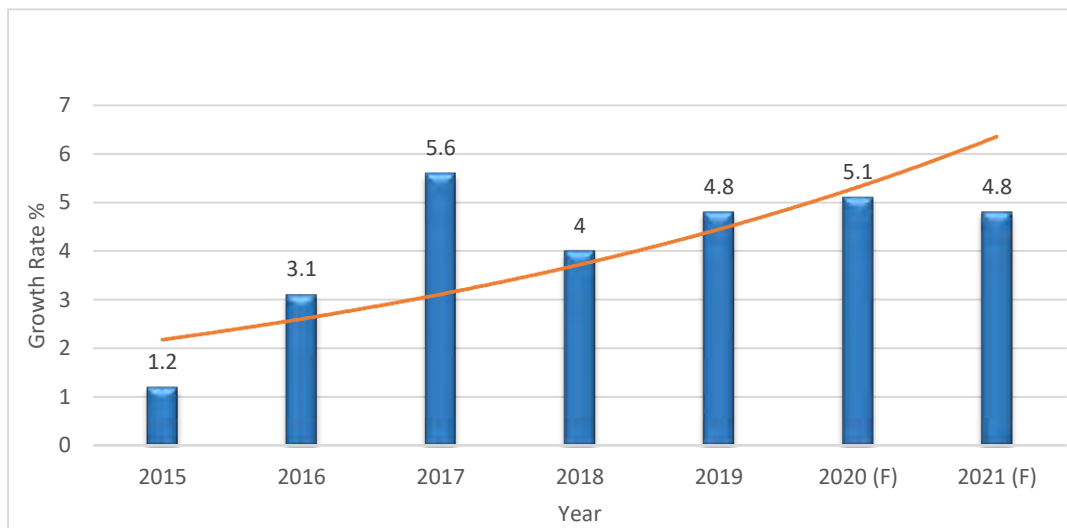
Liner Shipping or containerized shipping not only connects the countries, market, business people but also creating millions of jobs around the globe through shipping, harbor maintenance, storage facilities, trucking system and many more. It contributes in every single country's economy and increase gross domestic product and millions of cargoes are shipped in different ports and countries and container ship carries 60% value of goods of world economy through sea.



**Figure 1: Percentage of Transportation by different ways**

In term of efficiency, containerized shipping is the most efficient one to transport cargo. A single large containership can carry over 200,000 container loads of cargo whereas individual ships vary in size and capacity. Moreover, on a single voyage many container ships can transport up to 8000 containers of finished products.

That is why, the growth of containerized trade is increasing year by year and experts from

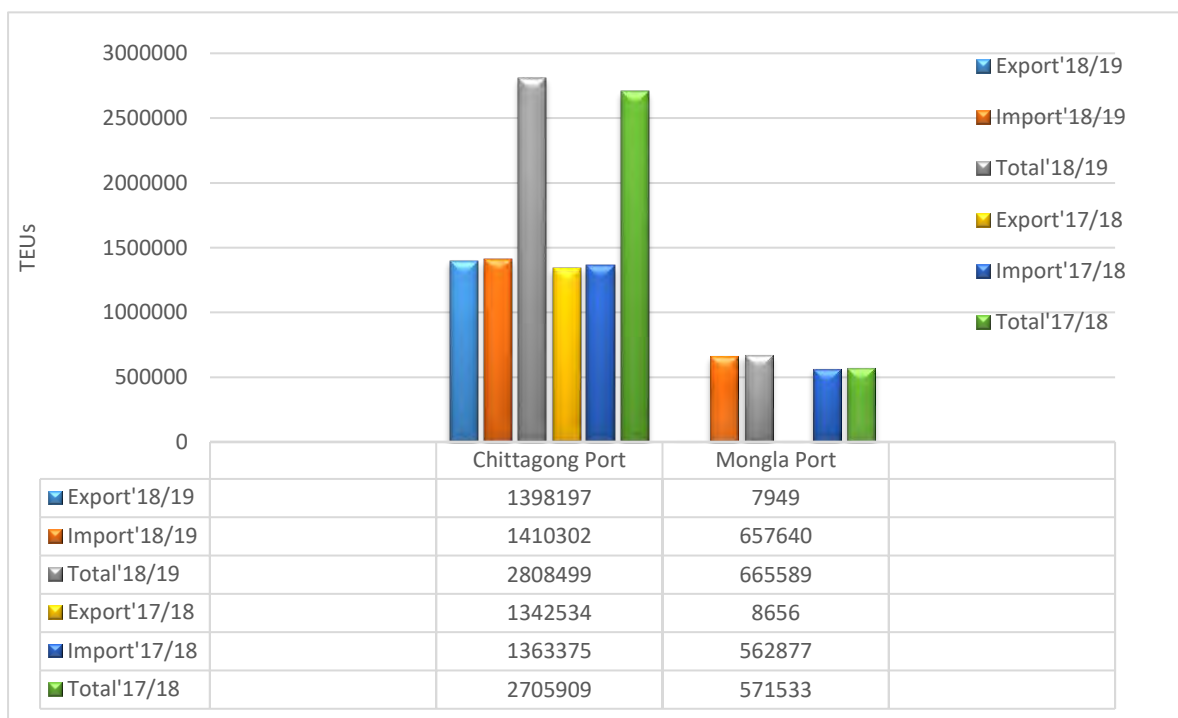


**Figure 2: Containerized Trade Growth Forecast (Source: IHS Markit, 2019)**

logistics and transportation sector assume that this industry will be a significant factor which will set a great impact on trade economy.

Besides, in trade affairs; ships have been playing a major role in Bangladesh because of its riverine geography. In commercial sector, the pioneer of shipping business in Bangladesh is BSC (Bangladesh Shipping Corporation). BSC was established on 5<sup>th</sup> February, 1972 as a state-owned public-sector corporation with a view of providing an efficient, reliable, safe and economic shipping service for local exporter, importer, business organization as well as foreign investors or company. Presently, BSC consist of 13 ocean going vessel including two tankers which are engaged in sea borne trade in different international sea routes.

In addition, the port of Chittagong is generating 30 percent GDP and handling 90 percent of national and international maritime trade. In July 2019, through Chittagong port; 126224 TEUs and 125611 TEUs was exported and imported respectively in just one month. In August 2019, it was 264072 TEUs export and 145579 TEUs import. The growth was 4.25% and 4.86%. The second largest port of Bangladesh which is Mongla is handling approximately 1.6 million of tons cargo in a year.



**Figure 3: Container Handling (2018/19 & 2017/18) (Source: Chittagong Port Authority)**

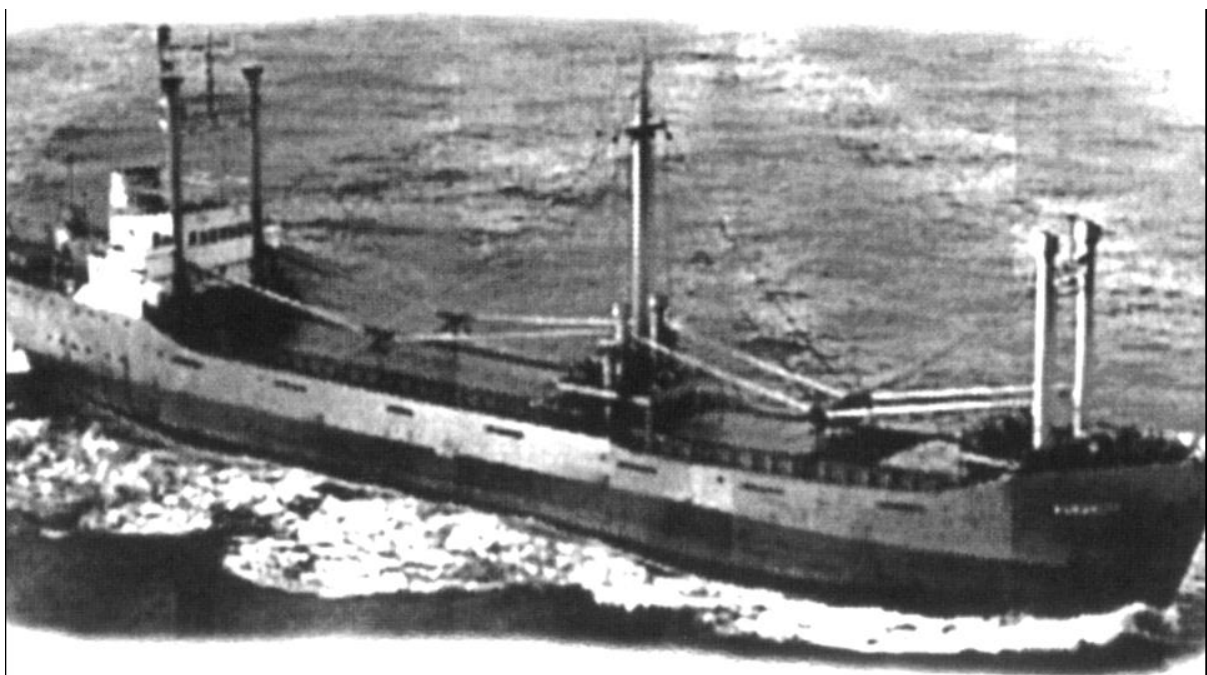
From last two fiscal years, the amount of containerized cargo export/import has increased. Containerization has greatly reduced the expense of international trade and increased its throughput. In 2017, 2.53 million TEUs handled at a growth of 9.46%, whereas the capacity is 2.2 million TEUs. Experts are expecting that, this container handling might cross 3 million TEUs by 2021. It shows future prospect and possibilities of container shipping industry in Bangladesh.

## Chapter 3

### Organization Overview

#### 3.1 Creation of Mediterranean Shipping Company S.A. – MSC:

The Mediterranean Shipping Company was established by the Captain Gianluigi Aponte from a single vessel operation in 1970, who has a long-term maritime experience. Mr. Aponte started the operation as a tramp operator with only one second hand ship that used to carry break bulk named Patricia.



*Figure 4: The Patricia*

The following year, The Rafaela was introduced, the 2<sup>nd</sup> vessel that operated through Italy-East Africa region. The 3<sup>rd</sup> vessel was added in 1973 which helps them to offer almost regular monthly liner shipping service from West Mediterranean to East Africa and Red Sea. Year by year, this liner shipping company's business has increased and becomes the world's 2<sup>nd</sup> largest container shipping company.

In addition, this company has also cruise line business named MSC Cruise; which was established in 1989 and now this cruise line becomes the 4<sup>th</sup> largest cruise company in the world.

### **3.2 MSC Today:**

Now, Mediterranean Shipping Company is operating as a global business company in liner shipping and logistics sector, operated in 155 countries at present.

The HQ of MSC is in Geneva, Switzerland and it is a privately-owned company that is solely driven by Aponte family. A company, that started their operation by one single vessel and now it contains a fleet of 520 vessels and more than 70,000 staffs. Through a vast network coverage of 493 offices around the world, MSC ensures that shipper, FFW, consignee can directly contact with the representative of MSC. In addition, e-business solution helps MSC respond to the customers need anytime.

MSC calls at 500 ports with 200 different trade routes around the world, carrying around 21 million TEUs annually by their impressive modern fleet which is highly digitalized with latest technologies. Hence, MSC can deliver goods and services to local communities, customers and international organizations. Their unified global network of sea, road and rail resources, allowing them to deliver cargo anywhere in the world.

Over the years, MSC differentiated its activities in many ways, including sea transportation, warehousing, trucking, logistics, terminal investment and many more. Yet, MSC's effort remain same to its root and still they work on their operation and relation with their customers for a better environment for their business.

The founder of MSC is Captain Gianluigi Aponte, who is the group chairman now. For many years' CEO was his son Mr. Diego Aponte but in November 2019, MSC appointed Soren Toft as a CEO of MSC, who is the former COO of Maersk Line.

### **3.3 Mission, Vision and Values:**

The mission of Aponte family regarding their MSC group is to provide consistent and sustainable transportation solution by their integrated network of sea, rail and road to their customers in all industries. And also maintain the core root of this company which is long term relationship with customers that is based on their knowledge, professionalism and care.



The vision of Mediterranean Shipping Company is to be the most effective, technologically advanced and customer-oriented shipping line in the industry. MSC wants to reach at people's daily lives by enabling global trade with honesty, accountability and respect towards the environment.

As MSC group continues to grow in their business; they set some values for the company so that MSC people around the globe can work with utmost passion and enthusiasm along with these values. The values are:

- It is a family company. Each of their employee consider themselves as a member of this family
- Have passion for sea, for this industry
- Continuous evolution in business is one of their core values which helps them to be consistent
- Care for people means care for employee, care for customers which represent them as a customer-oriented company.
- MSC believes in equal opportunity.

Many captains, manager, crew members are still with MSC group which represent their values. In Brazil, one vessel crew gradually becomes a director of Brazil operation which show that MSC truly believe in equal opportunity.



These values are present in all the MSC people including Cargo division, Passenger division and everybody who are working under MSC.

### **3.4 MSC at a glance:**

In early stage, MSC was the liner shipping company but gradually they become a group of companies. Over the years they strategically invest in many sectors and gradually created a group of companies.

- **Cargo Division:** Under cargo division MSC operates
  - i. MSC – a global leader in shipping and logistics. 520 vessels, 200 routes, 500 ports, 21 million TEUs carrying annually, 493 offices and operated in 153 countries.
  - ii. TiL – Terminal Investment Limited; one of the largest terminal investor and operators. Invested in 62 terminals around the globe, 2 greenfield terminals and 34 million containers moves per year.
  - iii. MEDLOG – transport and logistics service; operating in 70 countries, have 150 operating yards and 3.5 million TEUs transported by road, barge and rail.
- **Passenger Division:** Under passenger division they have
  - i. MSC Cruise – world’s largest privately-owned cruise company; it has 17 modern and technologically advanced cruise ship, operating in 81 countries with 3845 port calls.
  - ii. GNV – a shipping company operating as coastal navigation, cargo and passenger transport in Mediterranean Sea.
  - iii. SNAV – a ferry service which has 25 ferries, operating in 17 routes with 17 port calls.

### **3.5 MSC and Bangladesh:**

MSC started their operation in 2010 in Bangladesh. Since then, they are successfully contributing in Bangladesh economy and creating value and delivering their services efficiently and effectively. MSC is providing professional service in different industry in Bangladesh.

Such as they are providing service in Agriculture industry, Automobile industry, Chemical and Petrochemical industry, Food and Beverage industry, Mining and Minerals industry, Pulp-Paper and Forestry products, Plastic and Rubber industry, Retail industry and so on.

MSC has reached globally; operating their business in America, Africa, Europe, Middle East, Asia-Pacific region, Australia, Indian Ocean Islands and so on.

In America region they are providing services in 32 countries; in Africa, they serve in 43 countries; in Europe, they operate in 47 countries; in Middle East, it is 13 countries and in Asia-Pacific region it is 20 countries. Other than these, they transport cargo in many countries wherever the cargo needs to deliver.

MSC's main products are their different type of containers. Like,

- 20ft / 40ft standard and high cube containers.
- 20ft / 40ft open-top containers.
- 20ft / 40ft and high cube reefer containers.
- 20ft / 40ft flatracks.
- 20ft / 40ft platforms.
- 20ft / 40ft open-top containers etc.

The measurement is like

20ft (28,200 kg)	} DV (standard) (8.6 in height)
40ft (26,600 kg)	

TEU = 20 Foot Equivalent Unit; use to describe the capacity of container.

1 TEU = 20ft long container.

Furthermore, they provide different services like door to door transportation, e-business solution, cargo trailers, warehousing etc. In brief, it will be covered in value creation chapter.

### 3.6 Competitors of MSC:

The age of MSC is not very old compare to its competitors; still this company is showing very promising growth in container shipping industry. Though, MSC Mediterranean Shipping Company is the 2<sup>nd</sup> largest container shipping company in the world with the revenue of 28.19 billion USD but it has also some competitors. World's largest container shipping company is Maersk Line.

Here is a list of top 6 container shipping line:

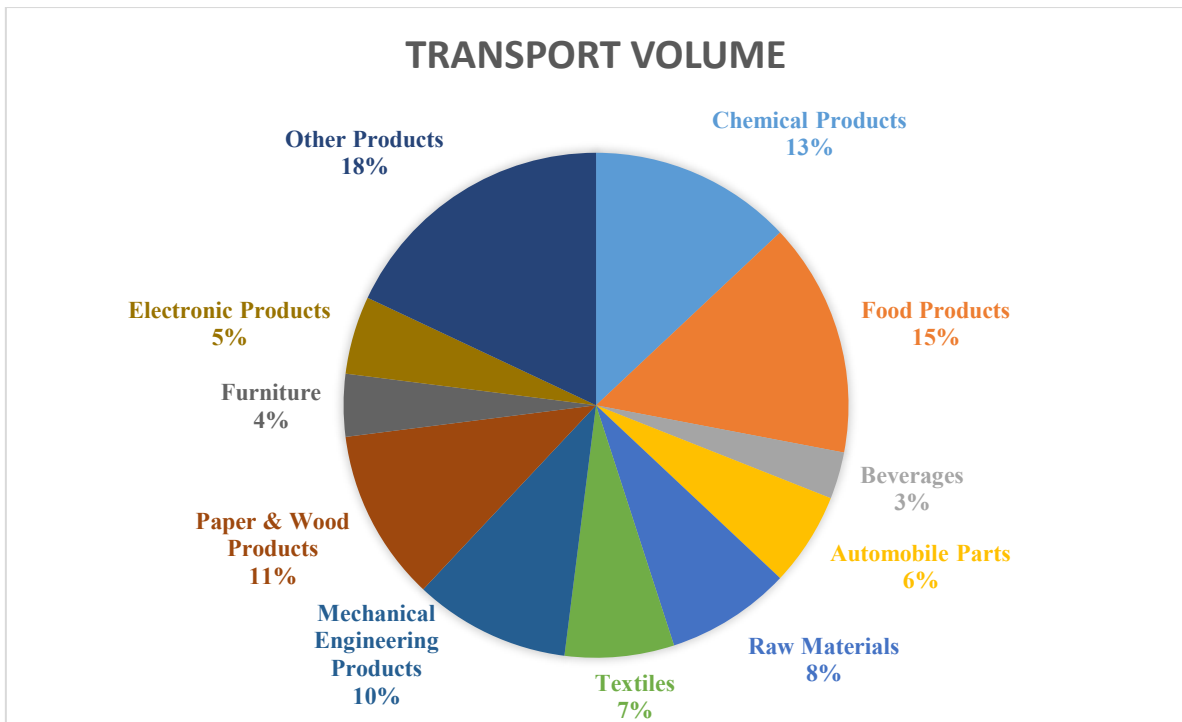
Origin Country	Name	Revenue (billion)
Denmark	MAERSK Line	35 \$
Italy	MSC	28.19 \$
France	CMA CGM	23.48 \$
China	COSCO	18.2 \$
Germany	Hapag Lloyd	11.9 \$
Taiwan	Evergreen	4.26 \$

*Table 2: Top 6 Shipping Line*

### 3.7 Key Commodities and Trading Partners:

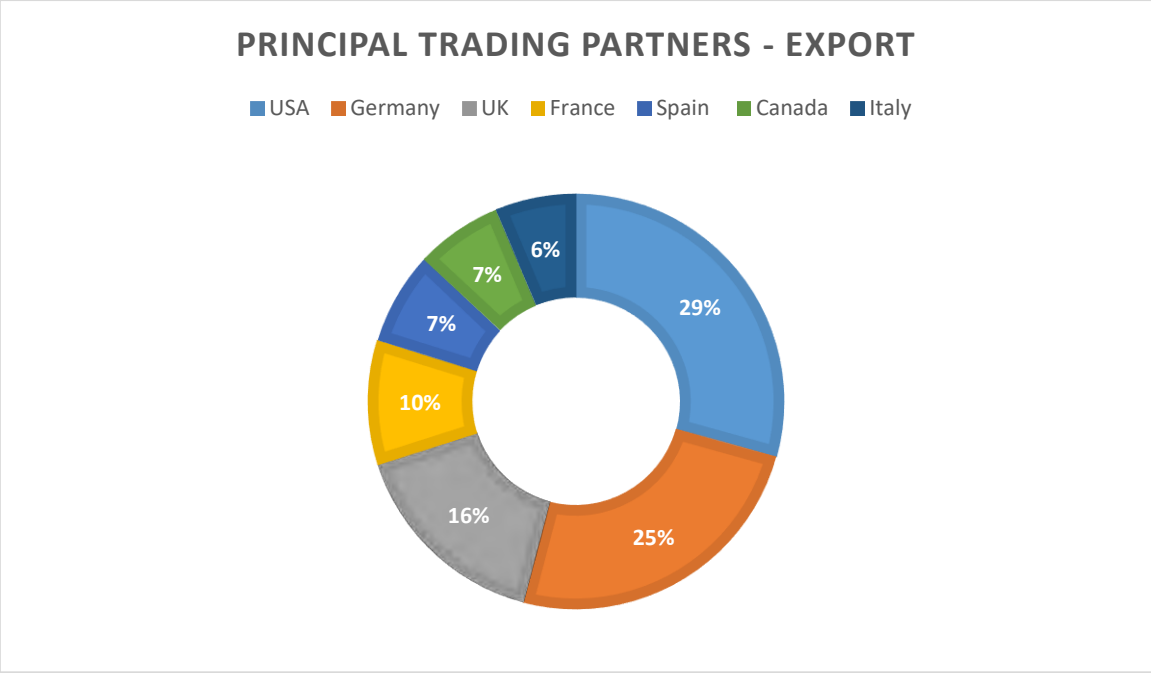
MSC transports all kinds of goods. From scrap material to garments, from out-of-gauge cargo to frozen foods; from dangerous goods (chemical) to heavy weight equipment; they shipped all sorts of cargo.

They export garments, knitwear, agricultural products, frozen foods, jute and jute products, leather and many more. The imported products are machinery and heavy weight equipment, chemicals, iron and steel, raw materials of textiles and other products, foodstuffs, petroleum products, cement and so on.

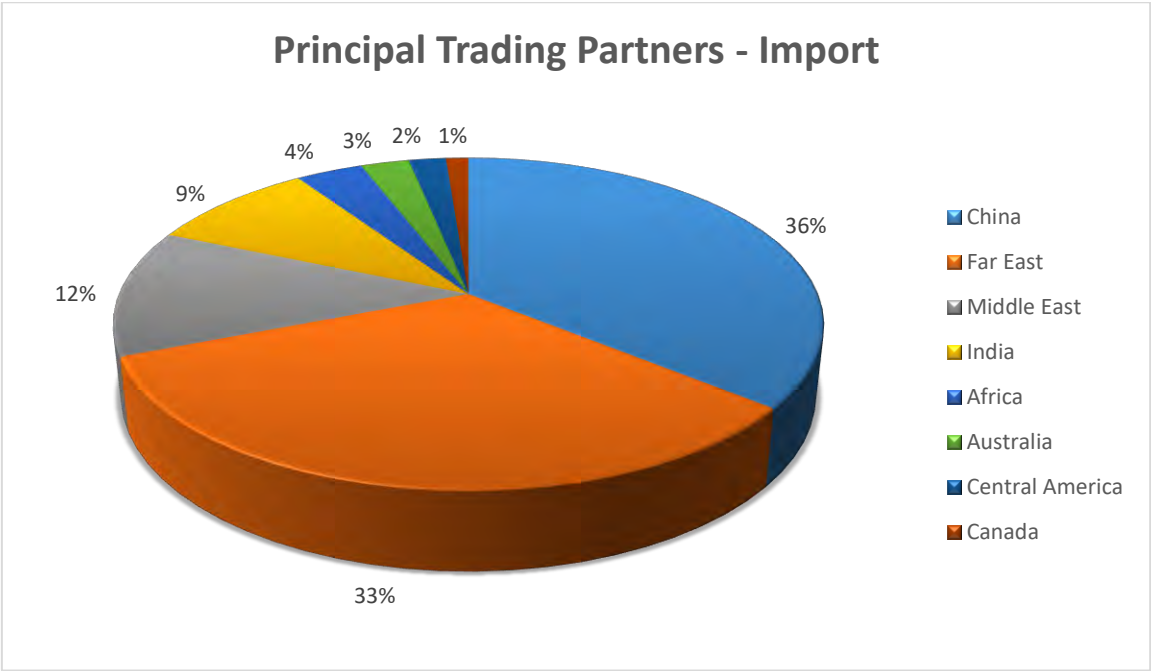


**Figure 5: Transport Volume by Product Category (Source: MSC Internal Report)**

The Bangladeshi economy has grown around 7.9% in 2018 and the GDP growth has the combination of Service Sector, Industry and Agriculture. These three sectors contribute 53.9%, 28.9% and 17.2% in total GDP growth respectively. More than half of the country's GDP is generated through the service sector. Bangladesh was named as one of the 'Next Eleven' by economist Jim O'Neill, as having a high potential of becoming, along with BRICs, the world's largest economies in the 21st century. Garment exports remain the backbone of Bangladesh's industrial sector and 80% of total exports, surpassing \$21 billion last year. By TEUs, Bangladesh exported 4,28,106 TEUs; 4,64,234 TEUs; and 5,50,000 TEUs in 2016, 2017 and 2018 respectively. Hence, MSC has a vast trade connection with a lot of countries around the world; yet they have some key trading partners country in term of export and import for Bangladesh.



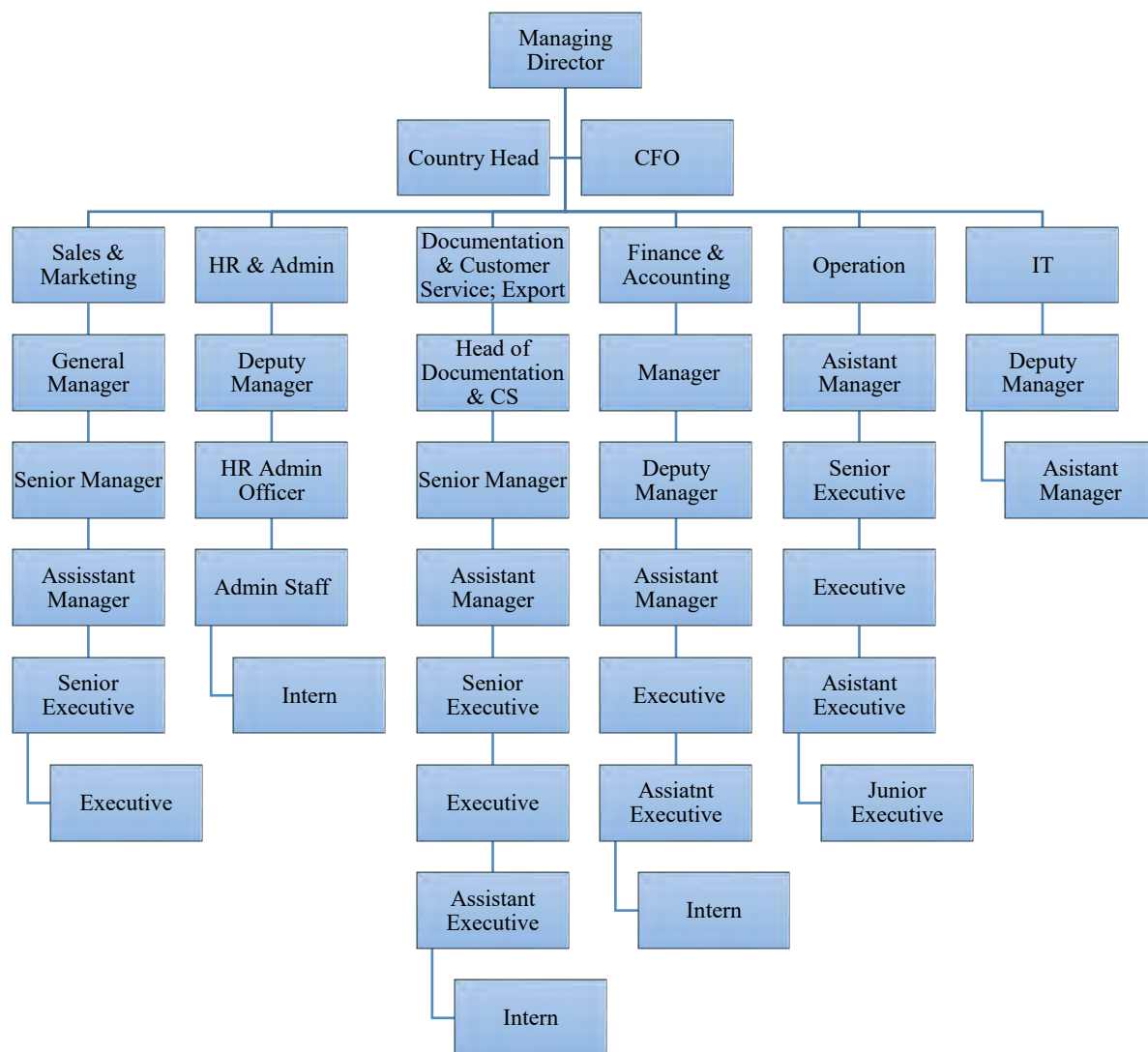
**Figure 6: Principal Trading Partners – Export (Source: MSC Website & Internal Report)**



**Figure 7: Principal Trading Partners – Import (Source: MSC Website & Internal Report)**

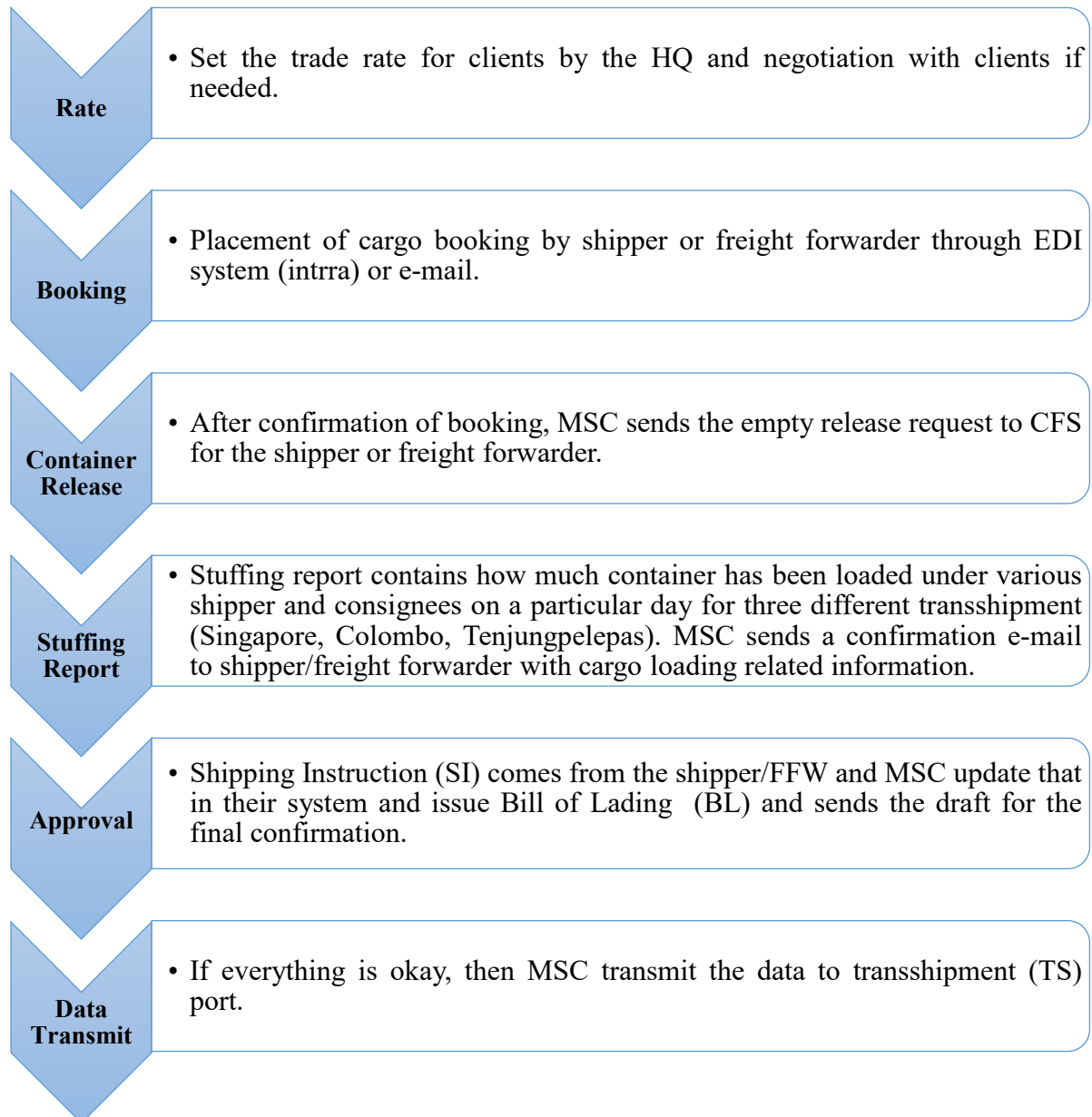
### 3.8 Organizational Organogram:

MSC Bangladesh has 3 offices; Head office in Dhaka; Operation office in Chittagong and another office is in Khulna. Organogram may vary slightly from region to region. However, here; the organizational organogram is a simplified version for an easy understanding.



### 3.9 How MSC Operates:

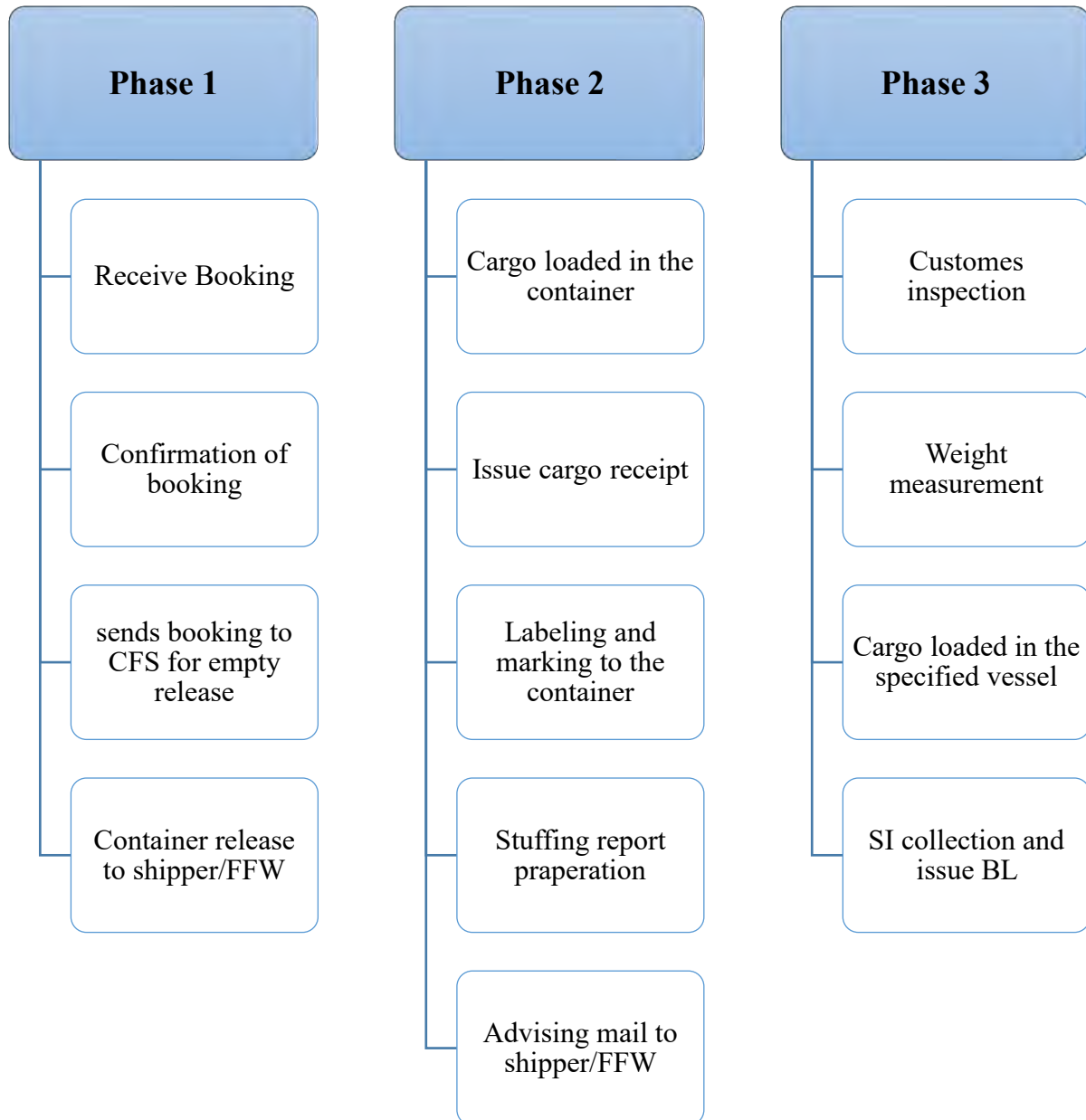
The transportation process is really very complicated and it involves many documentation processes. During my internship period, I have observed and learned the overall simplified process of the MSC's operation. The operation of MSC can be described in five simple steps which are:





However, this is a simplified flow of operation but in each step, there are more detailed and complex procedure that MSC does on a regular basis to provide a seamless operation to their customer.

In term of logistics service, further detailed phases are:



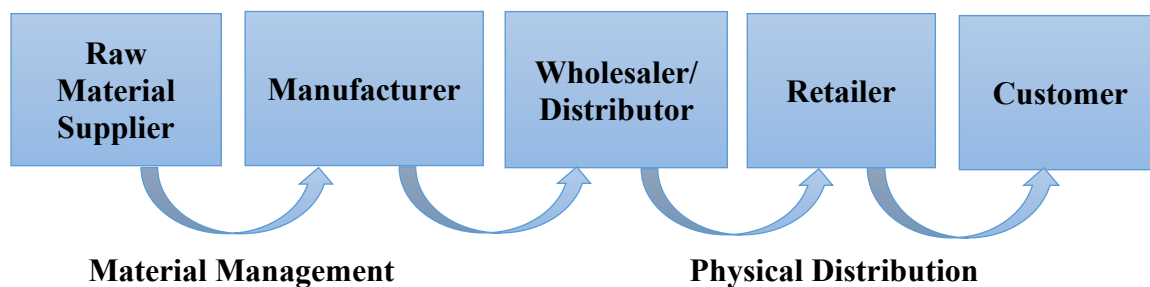
## Chapter 4

### Supply Chain and Logistics

#### 4.1 Supply Chain Management:

A Supply chain is a sequence of organizational facilities, functions and activities that are involved in producing and delivering a product or service. Supply Chain Management is the strategic coordination, design and management of a unified and value-added process of business functions within a business organization and throughout its supply chain in order to maintain the supply and demand management. The facilities include warehousing, transportation, processing, distribution centers, retail outlets etc. Function and activity include forecasting, procurement, inventory management, quality assurance, scheduling, routing, production, distribution and many more. A typical supply chain may involve in following stages:

- Raw Material Supplier
- Manufacturer
- Wholesaler/Distributor
- Retailer
- Customer



*Figure 8: Simplified Supply Chain*

However, the concept of SCM, as we understand today, represents at least three precise main streams of knowledge and practical experience in business world over the last 60 years. Under these three main streams there are other allied functions that forms a well-structured chain system which help an organization to use their resource more efficiently and effectively. This systematic approach helps the organization to survive in today's contemporary business world. These three principle streams are:

- Sourcing, Procurement and Supply Management

- Material Management
- Logistics and Distribution

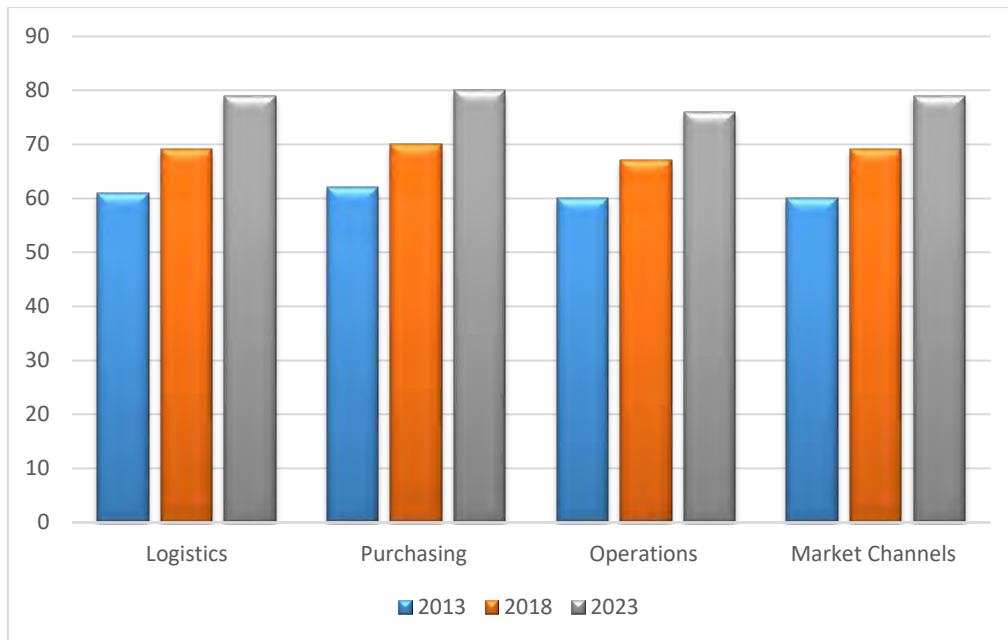
Business organizations realize that to increase the profit through increasing sales might not be a key factor rather reduction in procurement prices may give them a competitive edge which may lead to efficient sourcing and supply management through different market channels. Hence, Sourcing, Procurement and Supply Management concerned with economical inflow of material with the aim of having efficient control over funds of the company.

Classic Material Management included the functions of forecasting, inventory management, stock keeping, scheduling and later on production planning and production/capacity control evolve as extended material management. In relation to supply chain management. It can be viewed as the management of the material flow into the process, adding value for the customer. The core objective is to minimize the overall cost of production and increase the profit without compromising the service level.

Logistics and Distribution is a part of supply chain management with the aim of meeting the customer demands through planning, implementation and control over the movement and storage of goods and service from origin to destination. Proper logistics planning helps the organization to reduce expenses and enhance the customer satisfaction and comprehensively it creates synchronization between other streams of supply chain. In context of supply chain management, logistics may fall as inbound and outbound logistics. However, logistics emerged as a cross functional tactic that integrates all other key streams as well as other associated function within a supply chain; starting from procurement, inventory management, production, warehousing, storage keeping to transportation and many more. The whole process is solely focused on ensuring efficient operation.

Thus, the core objective of every supply chain should be maximization of the overall value generation. The value a supply chain generates is the difference between what customer willing to pay for a product or service and the cost supply chain incurred to fulfilling customer's requirement.

According to a report published by globalEdge Business review, by 2023 global logistics development will increase to 79%, purchasing development will be 80%, overall operation efficiency will rise to 76% and market channel growth will be 79%.



**Figure 9: Supply Chain Functions (Source: globalEdge Business review)**

Therefore, supply chain design, planning and operation decision plays a significant role to create value in supply chain of a firm and to be competitive in the industry firm must adopt technological advancement and meet customer’s expectations.

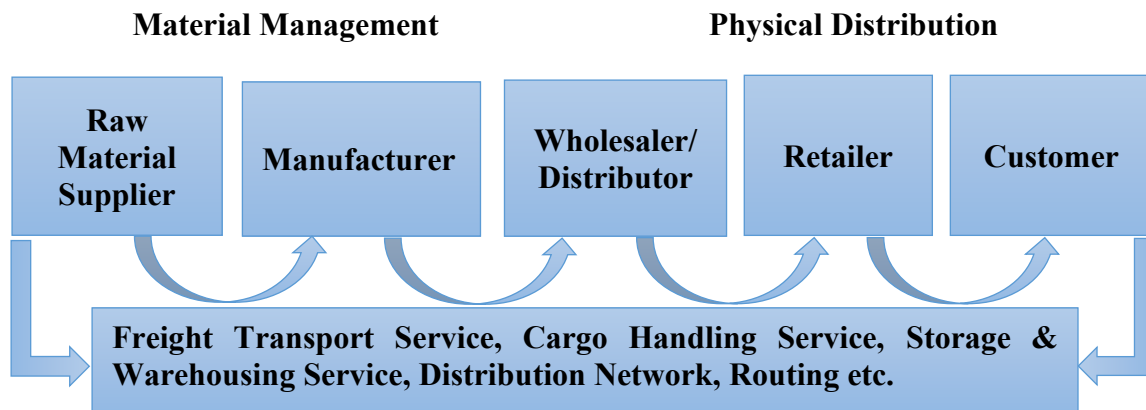
## **4.2 Defining Logistics Management:**

The term Supply Chain Management and Logistics Management are often used interchangeably but there is difference between these two terms. Logistics Management is a part of Supply Chain Management that deals with the movement of goods and services from origin point to end destination. As stated by the Council of Logistics Management, it is the part of SCM that plans, implements and controls the efficient, effective, forward and reverse flow and storage of goods and services and related information between the point of origin and point of consumption in order to meet customer’s requirements. Therefore, logistics management involves in different activities, mostly in:

- Selecting appropriate vendors with the ability to provide proper transportation
- Picking the most suitable and operative route for transportation that will minimize the overall transportation cost at the same time will cover the maximum destination.
- Finding out the most resourceful distribution network method

- Using IT resources for profound handling of overall process
- Warehousing and storage keeping

As described in preceding part that typical SCM has five simplified stages; it needs to be noted that from the perspective of logistics management, the supply chain process is considerably longer. However, to keep it understandable, some elements of logistics like transit, transshipment, cross docking are not included.



*Figure 10: SCM Process from Logistics Perspective*

In logistics, transportation plays a significant role as it accounts up to 50 percent of total logistics cost; efficient planning and strategy becomes an important condition to have an organized logistics process. Delayed delivery or careless transportation of goods will lead to customer dissatisfaction and gradually this sort of poor logistics planning may increase the expenses.

Thus, Effective and responsive transportation planning deliver the product on time which is a priority for a successful business. Besides quality and quantity of the product, availability of the product and service is also a value-adding process within SCM and logistics management. Advance transport management system (TMS) may give the company competitive lead to track real time movement of goods. Company should opt for shortest yet safe route for delivery along with the selection of distribution network design. Collaborative decision between transportation service provider will lead to a safe, reliable and efficient transport management system and will eventually reduce the cost and deliver value to the customer.

### 4.3 Logistics Sector of Bangladesh:

Bangladesh is considered one of the 45 major emerging markets of the world according to the Agility Emerging Market Logistics Index (AEMLI). This index recognizes the qualities that make an emerging market attractive for logistics companies such as air cargo carriers, shipping lines, freight forwarders, and distribution property companies. As stated by The Financial Express (February 9,2017), on a ranking of major logistics markets for the future Bangladesh has placed 27th position out of 50 countries.

Bangladesh logistics sector is fortified by freight forwarder and third-party logistics (3PL). Usually, foreign party offers warehousing, freight service, transportation service by creating joint venture contracts with local Bangladeshi service provider. This association open the further domestic development in logistics sector. This collaboration also improves the transportation infrastructure and modern transport system. GDP From Transport in Bangladesh increased to 11671.90 BDT million in 2019 from 10920.80 BDT million in 2018 (Bangladesh Bureau of Statistics).

#### 4.3.1 Mode of Transport:

There are different modes of transport like Water Transport, Road Transport, Rail Transport, Air Transport, Multimodal transportation.

<b>Water Transport</b>	Water transportation is the most used transportation mode in Bangladesh. Approximately 7% is covered by inland waterways of the country. Inland water transport carries around 40 percent of total imports and export of Bangladesh. Two national ports Chittagong and Mongla that handles seaborne cargo. Water ways offer considerably low-cost transport compare to road and rail.
<b>Road Transport</b>	Over the last two decades, the development rate of new roads in Bangladesh has been very promising. Road transportation system has been playing a vital role in logistics sector of Bangladesh. 13% value of cargo transported by road. Road transport is a crucial medium of container transport.

<b>Air Transport</b>	Air freight refers to the volume of freight, express and bags carried on each flight stage (from taking off to landing). Air transport, freight (million ton-km) in Bangladesh was reported at 53.98 in 2016, according to the World Bank collection of development indicators. Air carrier departure worldwide reported at 59728 in Bangladesh (Trading Economy).
<b>Rail Transport</b>	Though, freight transportation by rail in Bangladesh is declining due to poor quality service of railway but transportation of freight between Chittagong Port and ICD (Inland Container Depot) at Dhaka is increasing because of low cost and short transport time. In 2017-18 fiscal year, Bangladesh railway transported nearly 75,000 TEUs to and from Dhaka and Chittagong. Each day three trains leave Chittagong ICD for Dhaka ICD carrying 120 to 160 TEUs. In November, 7524 TEUs cargo transported to Dhaka ICD by rail.
<b>Multimodal Transport</b>	A multimodal transport system can improve the transportation infrastructure and can provide the companies a better and efficient logistical planning in term of transport system. Multimodal transportation is the combination of water, rail and road transportation. For having a competitive advantage in export/import business, multimodal transportation system needs to be taken seriously in logistics planning.

### 4.3.2 Port and Depot Coverage:

Regardless of several difficulties in transportation and logistics sector in Bangladesh, currently Chittagong Port and Mongla Port along with other private and public sector-based ICD, ICT and Container Depots are trying to create an organized logistics infrastructure and cope with container trade.

- **Chittagong Port:**

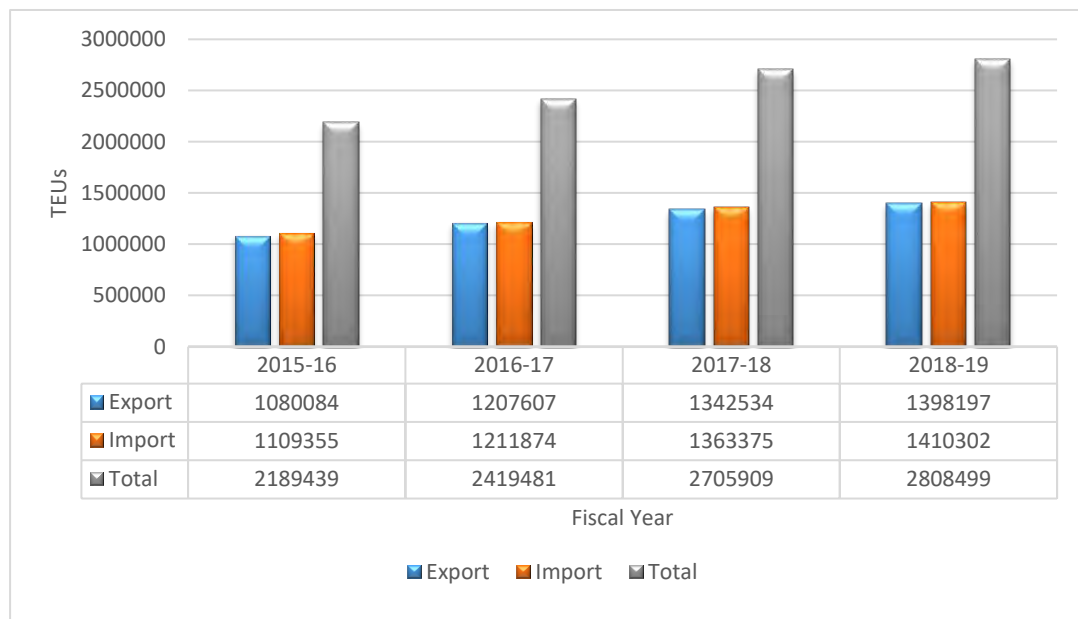
Chittagong port is the beating heart for Bangladesh economy. At present, this major sea port has the storage capacity of 50,000 TEUs. Chittagong port handles 90 percent of sea borne trade of Bangladesh. In 2017, Chittagong port handled nearly 3 million TEUs cargo whereas the design of the port can handle up to 1.7 million TEUs. The average container handling growth of Chittagong port is more than 10 percent. The

following table will showcase the export/import products that are traded frequently through Chittagong port:

Export Products	Import Products
RMG & Knitwear	Food Grain
Fertilizer	Cement Clinker
Jute & Jute Products	Sugar & Salt
Leather & Leather Products	General Cargo
Tea	Iron Material
Molasses & Frozen Foods	Chemical & Coal
Naphtha	Edible Oil

**Table 2: Export/Import Products**

Container Handling Statistics at Chittagong Port are given below:



**Figure 11: Container Handling at CTG Port (Source: Chittagong Port Authority)**

For this increasing number of container trade, Chittagong Port Authority (CPA) has been planning to build a mega container yard measuring of 1.19 million-square-yard which will increase the storage capacity of port up to 600,000 TEUs (The Journal of Commerce, 2019). Developments plans are ongoing to improve the facility of Chittagong port like installation of surface water treatment plant, acquisition of sea



going supply vessel, high powered tug boat and container and cargo handling equipment.

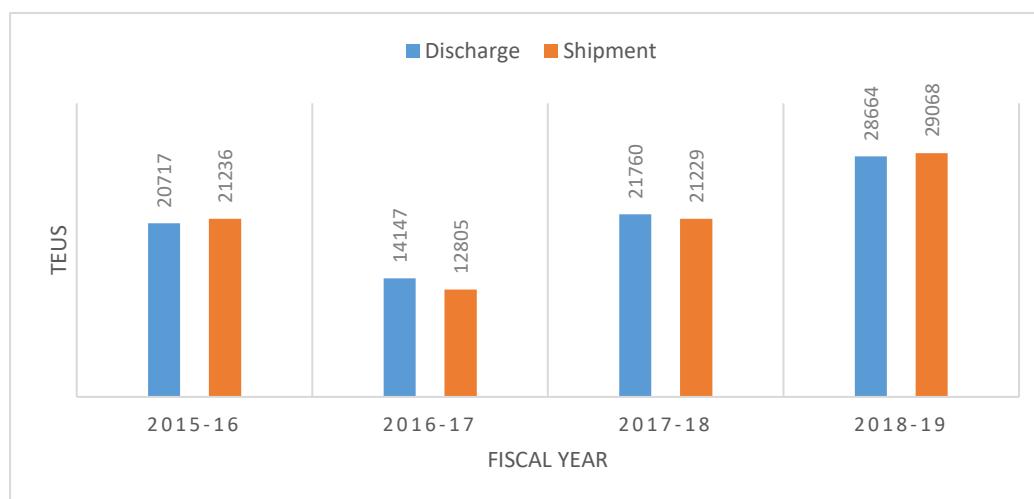
- **Mongla Port:**

It is the second largest port of Bangladesh but It cannot be compared with the Chittagong port because it handles less cargo and has lesser facilities compare to Chittagong port. The Mongla port has the capacity to handle 50,000 TEUs container per year. At a time in Mongla port 33 vessels can avail loading/unloading facility. The export/import products that traded frequently through Mongla port are:

Export Goods	Import Goods
Jute & Jute Products	Food Grain
Frozen Foods	Bulk Cement
Shrimp	Machinery
General Cargo	Motor Vehicle
RMG	General Cargo

*Table 3: Export/Import Goods*

Container Handling Statistics at Chittagong Port are given below:



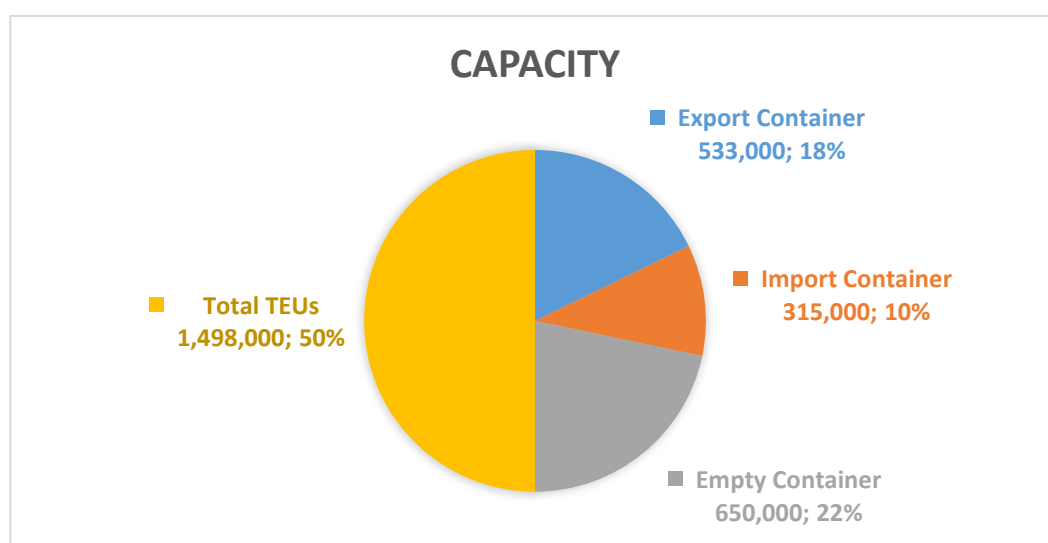
*Figure 12: Container Handling at Mongla Port (Source: Mongla Port Authority)*

Government of Bangladesh wants to improve the facility of Mongla port so that the pressure on Chittagong port can be minimized at a certain level. Authority already invested in multiple projects to upgrade the facility of port. For instance, procurement of cargo handling equipment, navigational aids have been implemented, warehousing

for containers have improved, procurement of pilot and tug boat and other operational plan has been undertaken by the government.

- **Inland Container Depot (ICD):**

All the ICDs are responsible for stuffing, unstuffing facilities of containerized cargo and warehousing for empty containers. According to Bangladesh Inland Container Depots Association (BICDA), the total handling capacity of ICDs are 1,560,000 TEUs and in 2017, they handled 1,498,000 TEUs; almost close to their total capacity. In 2017, they have handled



*Figure 13: Capacity Handled in 2017 (ICDs) (Source: The Journal of Commerce)*

ICDs handle 91 percent export container and rest of the 9 percent container use to transport directly from the shipper premises to port. In import sector, ICDs handles 25 percent import containers but 20 percent containers transport directly to the factory. There is also matter of FCL and LCL. If it is FCL (fully loaded container) then it is comparatively easy to handle. But if it is LCL (less than container) then it consists different cargo from different shipper and so from ICDs this LCL has to transport separately to the shippers. There are numerous ICDs, mostly located around Chittagong and one is near to Dhaka. The list is given below:

Depot Code	Depot Name
INCON	Incontrade Depot
EBIL	Esack Brothers Industries Ltd
SAPL	Summit Alliance Port Ltd

PLCL	Port Link Logistics Centre Ltd
GCL	Golden Container Ltd
SML	Shafi Motors Ltd
VERTEX	Vertex Off-Dock Logistics Service
BM	BM Container Depot Ltd
BDCGPAS	Ispahni Summit Alliance Terminals Ltd
ICD	Dhaka Inland Container Depot
KT	K & T Logistics Ltd
BDMGL	Mongla Port Yard
KDSL	KDS Logistics Ltd
OCL	Ocean Container Ltd
ELL	Eastern Logistics Ltd
QNS	Qns Container Service Ltd
NCL	Nemsan Container Ltd
CEPZ	Chittagong Export Processing Zone
CEPZ/Y-5	Chittagong Export Processing Zone (Y-5)
EPZ/NCT	Chittagong Export Processing Zone (NCT)
CEPZ/GCB	Chittagong Export Processing Zone (GCB)
S/P	Shipper Premises

*Table 4: List of ICDs*

- **The Pangaon River Terminal:**

Pangaon River Terminal is a very interesting and resourceful investment by the government of Bangladesh in logistics sector with the aim of lessen the pressure of containerized cargo handling and storage in Chittagong port. It is the first Inland Container Terminal (ICT) beside the Buriganga river. It also eases the land transport method by using inland waterways. This terminal has the capacity of 3500 TEUs and handles 116,000 TEUs annually.

There is no doubt that over the years, the logistics sector and logistical infrastructure of Bangladesh has improved and containerized shipping just boost the economy in many ways and tapping the opportunities and possibilities every now and then.

## Chapter 5

### Value Creation:

The supply chain process creates the fundamental worth of any business and responsible for the creation of value throughout the organization. The elementary idea of value creation through SCM is that, SCM integrates the different factors and processes in order to producing an output that people are willing to avail and pay. In a comprehensive way, SCM creates value by taking decision about what, why, how and where to do at a right time with a right price. This also includes the movement and storage of raw material and finished goods, WIP, inventory, transportation and many more elements within the chain.



*Figure 14: Value Creation of SCM*

However, this value creation depends on how the company outlines the scope and form of its business. An e-commerce company might be involved in marketing; on the other hand, a manufacturing company may rely on raw materials, production process, capacity and other criteria. Similarly, a variety of factors are determining the configuration of value chain from logistics perspective. Efficient logistics contributes to value addition in three major ways:

- **Time:** Company who focuses on time management stays in a better position in terms of inventory control and transportation.

- **Control:** Control over the production and distribution gives a company a competitive advantage in the industry and eventually this help to have a better synchronization between lead time and market demand.
- **Location:** It adds value in logistical planning which gives a better scope to expand the market and distribution of the product/service in a systematic manner. Having location advantage helps the organization to allocate their resources properly.

In a concise way; in term of container shipping industry, the value adding logistics activities can be represented as:

- **Logistics Cost:** Cost incurred by the transport company to make the final product available to end customer. This cost can be divided into many segments such as total transportation of cargo, warehousing, transshipment, vessel related cost etc.
- **Transshipment Time:** A factor that is considered with highest importance as it is strongly connected with the inventory carrying cost and meeting the market demand.
- **Reliability:** Reliability factor is more associated with the time and service of the carrier company. The more consistent carrier company will be in offering their service, the more contract they will get from the clients.
- **Warehousing:** From logistics perspective warehousing can be referred to simple storage, distribution, shipment loading and shipment discharge; packing/packaging of cargo; labeling of container; storage for empty container and many more.

From the beginning of its operation, Mediterranean Shipping Company intensively gives their effort in value creation through numerous ways in every country. How MSC is providing world class service in each country and how their logistical operation as well their service supply chain has been creating value continuously, this will be discussed in the following sections.

## **5.1 Transshipment:**

Due to competitive nature of liner shipping industry; “Transshipment” is one of the most significant elements of value creation from the perspective of container shipping business. Transshipment refers to the shipment of goods to an intermediate destination where the goods are loaded into another vessel (Mother Vessel) so that the cargo can be discharged at the final destination. Transshipment hubs connect different region of the world.

There are few impacts of transshipment in logistics management which are connected with cost and service level. For instance:

- Transport cost may increase with transshipment but the cost of fixed supply will decrease.
- Operational cost will increase but this cost and process will lead to increase in service level
- Storage cost will decrease and flexibility of service will increase

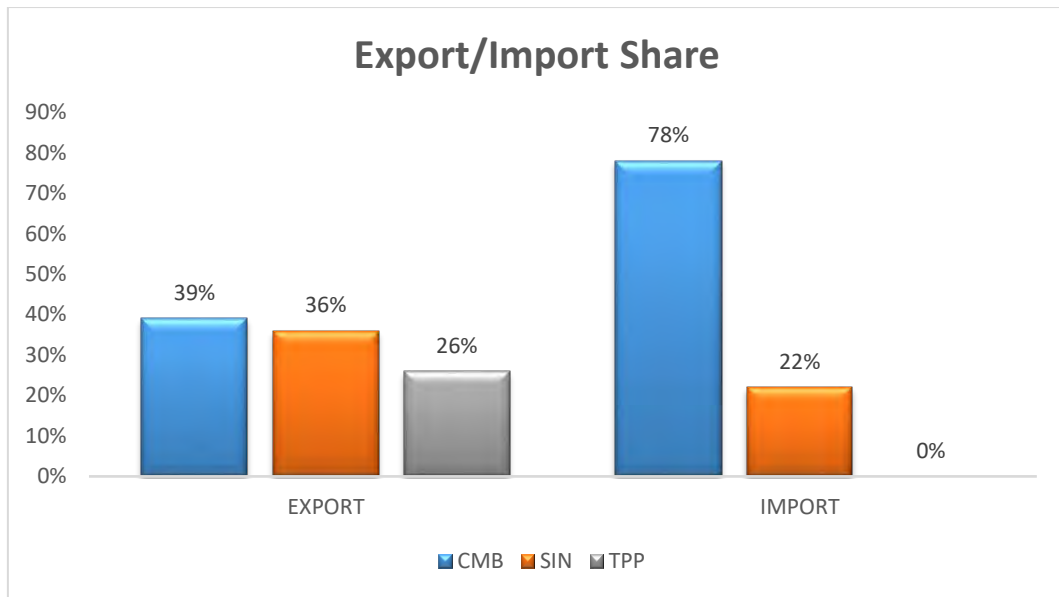
By keeping these impacts in mind; MSC comes up with a lot of transshipment hubs that connects many regions around the globe which eventually has helped them to increase their service level, meet the demand and adding value in their service chain.

However, particularly for Bangladesh; MSC use three transshipment hubs which are:

- Singapore (SIN)
- Colombo (CMB)
- Tanjung Pelepas (TPP)

The port of Singapore is currently the world's top transshipment port and the second busiest port globally, handling 36.6 million TEUs and growth rate of this port is 8.7 percent year on year. Malaysia's Tanjung Pelepas port is a key transshipment hub which is developed as an alternative of Singapore port. The total handling capacity of TPP is over 12.5 million TEUs per year at 7 percent growth rate. On the other hand, Colombo port is handling 7 million TEUs yearly with 8.3 percent growth rate.

Now, MSC is putting strategic decision to maximize the value of transshipment. According to the business trend of Bangladesh, management is focusing on export/import volumes and depending on the volume they are maintaining operation. For example, in term of import MSC share 78% with Colombo and 22% with Singapore transshipment port. The reason of this certain situation is that, the volume of import from TPP is very insignificant compare to other transshipment port for import as well as for export. Eventually it saves operational and transport cost. Conversely, for export sector MSC has 39% share in Colombo transshipment, 36% in Singapore transshipment and 26% for Tanjung Pelepas transshipment.



**Figure 15: Transshipment Share by MSC (Source: Internal Report)**

This strategy is helping MSC to create value in their logistical service chain and optimizing their liner operation. Also, customer is getting their goods within allocated time because of flexibility of liner service. Customers is getting this flexibility since MSC covers a lot of ports from the starting of transshipment hub which creates flexibility in their operation. However, here is a few names of port based on transshipment hub:

COLOMBO SERVICE					
<b>PORT</b>	New York	Norfolk	Savana	Freeport	Toronto
	Charleston	Houston	Chicago	Odessa	Ethopia
	Montreal	Mersin	London Gateway	Roterrdam	Memphis
	Felixtowe	Bremerhaven	Abu Dhabi	Hamad	Ad Dammam
	King Abdullah	Lome	Liverpool	Jaber Ali	Newark

TANJUNG PELEPAS SERVICE					
<b>PORT</b>	Hamburg	Gothenburg	Grangemounth	Aarhus	Meerhout
	Algeciras	Gdnask	Valencia	Antwerp	Le Havre
	Oslo	Dublin	Klaipeda	Bobadela	Sines

SINGAPORE SERVICE					
PORT	Ancona	Venice	Bari	Izmir	Istanbul
	Genova	Genoa	Miami	Dallas	Fos
	La Spezia	Beirut	Gio Tauro	Barcelona	Koper
	Trieste	Port Said	Tekirdag	Long Beach	Oakland
	Santos	Adelaide	Melbourne	Napier	Tauranga
	Durban	Brisbane	Port Louis	Sydney	Auckland
	Shekou	Lazaro Cardenas	Manzanillo	Seattle	San Antonio
	Vancouver	Cristobal	Buenos Aires	Wellington	Napier

*Table 5: Port names based on TS Hub*

## 5.2 Transportation Cost:

### 5.2.1 Intermodal Services:



Delivering the cargo at the door of end customer is one of the fundamental aims of MSC and to achieve this aim MSC offers a seamless voyage of client's cargo by providing intermodal transportation which is serving all industries globally. Intermodal Services are, basically, different solutions which combine the transportation by road, rail or barge. There are few states where port coverage is not up to the mark. Therefore, the inland intermodal service of MSC cover those areas with highest efficiency and safety. It has inland trucking service, rail service and barge service for any type of cargo container.

In Spain, MSC has introduced train service particularly for refer cargo container for better service quality. In Bangladesh, MSC has trucking coverage as a part of intermodal service from Chittagong/Mongla port to anywhere within Bangladesh. MSC covers Pangaon River Terminal as inland water depot through barge haulage. This intermodal process eventually creates value because

- It saves client's money as well as reduce the shipment delivery time
- This process can provide vast coverage because of its different mode of transport
- It also saves operational and logistical cost because there is no need to rent or book another transport.
- It minimizes the hassle of shipper/consignee to avail the shipment at the end point.

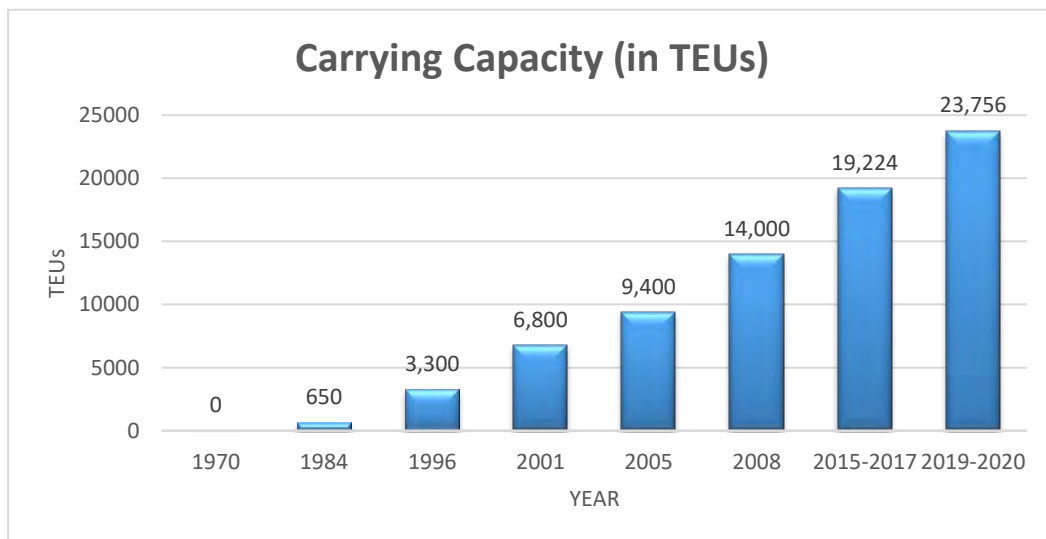




**Figure 16: Intermodal Services**

**5.2.2 Carrying Capacity:**

MSC is continuing to invest in bigger ship in order to increase efficiency, reducing the energy to transport each container. Bigger ship can carry huge amount of cargo which lead to maintaining the economy of scale as well as it lowers the carrying cost. In 2015, MSC introduced “Oscar Class” that can carry 19,224 TEUs in a single voyage and in 2019, they have introduced “Gulsun Class” which is the largest and biggest container vessel that carries 23,756 TEUs in a single voyage. The growth of larger vessel of MSC is given below

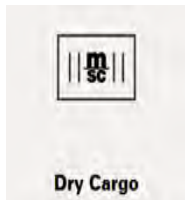


**Figure 17: Carrying Capacity of MSC (over the years)**

Thus, this intermodal service and capacity of vessel are creating value for customers.

### 5.3 Product and Customization Capabilities:

In liner business, product classified as different type of container. MSC, itself has 3 million containers around the globe for providing a flawless operation and meeting the customer demand. MSC offer three basic type of containers and these are:



**Dry Cargo Container:** Dry cargo service is the most common and traditional container service in container shipping industry. It has been advanced from the beginning of cargo shipping and it fulfills efficient shipping of any containerized cargo. It moves some of the world's most commonly traded commodities such as paper, garments, white-goods, scrap metals etc.



**Reefer Cargo Container:** Reefer cargo service, particularly, use for food products that requires refrigeration or freezing during shipping and transit period. Some food products need to maintain certain temperature throughout the transport from one country to another, otherwise the products might be eroded. Perishable commodities like fruit, meat, fish, vegetables, dairy products etc. need reefer cargo service.



**Project Cargo Container:** MSC provides worldwide breakbulk and out-of-gauge cargo service for first class project cargo management. Breakbulk or out-of-gauge cargo refers to that equipment which does not fit in or cannot be loaded in general or standard container. For this reason, they proved project cargo for heavy lift cargo or oversized cargo.

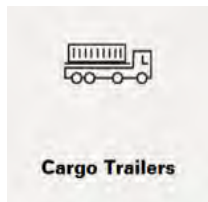


*Figure 18: Dry, Reefer & Project Cargo Container*

In addition, customers can choose containers equipment to suit the optimal transport for their cargo. In this case, MSC provides different type of containers, like:

- 20ft / 40ft standard and high cube containers.
- 20ft / 40ft open-top containers.

- 20ft / 40ft and high cube reefer containers.
- 20ft / 40ft flatracks.
- 20ft / 40ft platforms.
- 20ft / 40ft open-top containers



Additionally, Mediterranean Shipping Company has a well-maintained cargo trailers for any type of cargo for loading or discharge. MSC customers can select cargo trailers which will suit best for their cargo. MSC provides six types of cargo trailers and they are:

- Rigid
- Flatbed
- Tipper
- Low Loader
- Container-Lift Trailer
- Genset Trailer

These customized containers and cargo trailers give buyers and sellers a wide range of opportunity to deal with any sort of shipments. As a result, clients are willing to avail the shipment service of MSC.

#### **5.4 Warehousing and Storage:**



Mediterranean Shipping Company also has warehouse for their clients to deliver wide-ranging pick/pack, de-stuff/palletize, bulk stake and storage service and facilities. By providing this facility, MSC not only transport the cargo safely and quickly but also this particular facility is playing a synchronizing role in supply chain management. Warehouse and storage facility are giving the clients a comfortable situation to take decision about their cargo when and how to release. Additionally, this service saves money in terms of:

- Reduced inventory cost
- Lower container storage cost
- Reduction of demurrage bills.

- Coordination between cargo transit, discharge or delivery and security of cargo.

In Bangladesh, MSC is providing limited warehousing and storage capacity incorporate with various inland depot (discussed in 4.3.2) which add value within SC.



## 5.5 Digitalization:

In order to provide a satisfactory shipment service; company like MSC should evolve with innovative offering for their customer and by keeping that in mind, MSC management comes up with advance technological solution which provide a seamless shipment from the origin country to the destination country.

### 5.5.1 E-Solution:



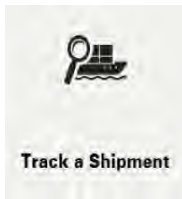
MSC offers their all clients 24/7 secure online portal service to manage their cargo. This online portal service system helps the client to overview their shipment and cargo under full supervision from their respective places. The service includes:

- Booking and Shipping Instruction submission
- Real Time Information of Cargo
- Tracking information
- Schedule of shipment all over the world and many more.

In addition, MSC provides additional EDI (Electronic Data Interchange) solutions to customers. This EDI is a secure two-way link to exchange information instantly between systems. This facilitates bookings, scheduling, status update, notification, account information, reservation etc. This solution, eventually, saves time and reduce cost of customers and lessen the need of manual intervention. Some most preferable EDI system among ocean carrier companies and customers are GT NEXUS, INTTRA, CargoSmart etc.



### 5.5.2 Track a Shipment:



Customer always want to know about their cargo when the cargo leaves the from the loading port. That is why, to give a relief; MSC provides 24/7 customer service in term of tracking a shipment. If any customer wants to know where is the cargo on a particular time, by the help of local team of MSC, customer will get the information. To avail this service, customer just need to give the Bill No or Booking No of that particular cargo.

Bill of lading: MEDUKA083022 (1 container)		
Departure date	Vessel	Port of load
25/10/2019	OEL COLOMBO	CHITTAGONG, BD
Port of discharge	Transshipment	Price calculation date*
SAVANNAH, US	COLOMBO, LK	23/10/2019

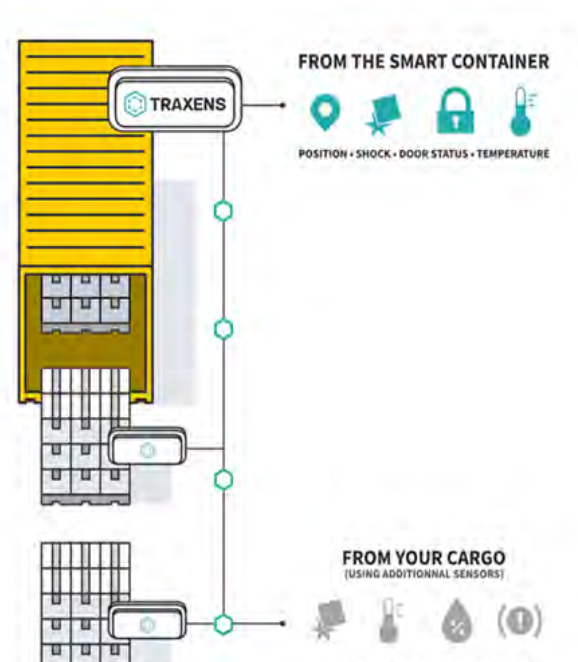
\* Price calculation date is indicative. Please contact your local MSC office to verify this information.

**Figure 19: Tracking Shipment**

### 5.5.3 Smart Container:

For a better customer service and as a part of value adding service in digitalization, MSC steps into the smart container service, partnered with “TRAXENS”; to give clients 24/7 visibility and real time report about the cargo’s position and condition.

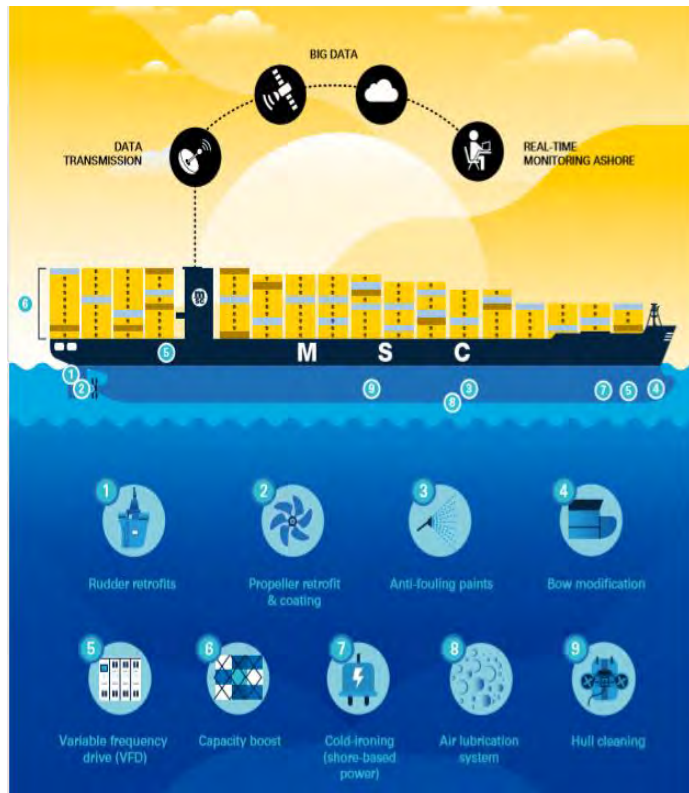
It is an internet connected device which permanently fixed with dry cargo containers that produce and provide information about Position, Temperature, Movement, Shocks, Door Opening etc. of cargo on sea, rail or road.



**Figure 20: Smart Container**

### 5.5.4 Real Time Monitoring:

Implementation of modern ship management systems and methods upon which the MSC Ship Managers perform their duties. They provide “Real Time Monitoring Performance” for ship management. This is a digitalized system that provide vessel related technical information such as engine power, fuel consumption, speed, temperature control etc. instantly which help the management team to monitor and control the overall system of ship in order to avoid unwanted technical issues which may occur during any voyage



*Figure 21: Real Time Monitoring Performance (MSC Sustainable Report 2018)*

### 5.6 Brand, Marketing and Sales:

Brand is a name, design or symbol that identifies a particular seller’s product or service from other sellers and in modern era branding includes marketing as well as communication to distinguish a company’s service or product from the competitors with the aim of creating a long-lasting impression in customer’s mind.

From last 40 years, MSC has built a strong and exceptional brand based on their people and relationship with clients. However, to maintain this exceptional brand position they have three key areas to work:

- Determine the brand position which add competitive advantage
- Establishment of brand values that help MSC to be one step ahead from their competitors.
- Improve the perception and understanding what MSC stands for, among the employee, clients and business partners.

To do so, the Global Marketing team along with the homegrown marketing team manages and continuously develops:

- MSC positioning
- MSC communication channels
- Customer Experience

In addition, as a part of sales collateral; MSC does

- i. **Advertising:** Print advertisement and Digital advertisement
- ii. **Campaign:** MSC do campaigns to communicate with people and organizations to promote their services and products. Particularly in 2016, they have run three key campaigns for Reefer Cargo, Project Cargo and for their brand.
- iii. **Email Marketing:** It is a type of digital marketing to communicate with big companies like H&M, Walmart, The Gap etc.
- iv. **Public Relation:** PR is about creating and managing positive perception of MSC. By the term “Public Relation” MSC refers governments, customers, business partners, industry associations and other parties related with this industry. Different type of PR activities set the position in the mind of stakeholders and ultimately influence the business purchasing decision of shippers and consignees.
- v. **Social Media & Web:** MSC has a well-designed, customer oriented and customer friendly website which consist and provides details information about their service and facilities.

Moreover, they maintain BCO, OCA and DCA account. These accounts represent:

- a. **Beneficiary Cargo Owner (BCO):** There are some clients who get prioritized by the company because of their long-term partnership and frequent business deal. Those clients or company known as Tender BCO or BCO. These client gets the freight trade rate and other necessary information directly from the HQ and by the direction of HQ, local office complete the procedure with those clients. And BCO takes the control over shipment from the destination port by their own logistics asset rather to utilize the third-party logistics.
- b. **Origin Controlled Account (OCA):** Carrier company maintain the communication only with the homebased company (shipper/consignee/FFW) and go through the procedure for transportation

- c. **Destination Controlled Account (DCA):** Here, carrier company keep the communication with destination service.

In addition, management maintain client accounts. Each sales and marketing personnel handle more than 40 customers and sometimes they maintain this approach based on country. Country to country they keep customer record. As a result, if any issues raise; dedicated and skilled employee can handle those issues properly. This strategy proves very effective for the MSC Bangladesh Ltd and for other countries and it is also increased the efficiency, like:

- For any problem faced by a particular customer, MSC management knows who the responsible sales personnel for that customer.
- This policy saves time and help the management act on time regarding any customer.
- Customers are satisfied because they do not need to wait for any employee to get any solution rather the responsible employee is always ready to serve.

The consistent development and implementation of above mechanisms; MSC just adding values in their total supply chain. That is why their tender account (client) is increasing.

<b>Tender AC</b>	<b>Earlier (T)</b>	<b>New (T)</b>
Matalan	0	1664
Carrefour	1883	2200
Sun Capitan	104	704
Halford	0	486
Tesco	617	859
Primark	500	6929

**Table 6: Increment of Tender AC (2017)**

Furthermore, H&M, ASDA and C&A has increased their volume.

Due to their strategies which are adding values in their service process, clients are now more contented to do business with MSC. Therefore, MSC has some giant companies, who are consistently transporting their goods by Mediterranean Shipping Company around the world.



However, here is a very short list of some giant companies which are basically sourcing different materials particularly from Bangladesh.

<b>Origin Country</b>	<b>Company Name</b>
United Kingdom	Asda
Netherlands	C&A
United State of America	Walmart
Hong Kong	LI & Fung
Spain	Zara
Ireland	Primark
Sweden	H&M
France	Decathlon
Germany	Puma
United State of America	Target Corporation
Italy	GruppoCoin
United Kingdom	Marks & Spencer
Germany	Adidas
Ireland	Dunnes
United Kingdom	Tesco
United State of America	The Gap
Australia	Wesfarmers
United State of America	Phillips Van Heusen Corporation
France	Carrefour
United State of America	Kohl's
United State of America	Nike
United State of America	Levi's
Spain	Mango

*Table 7: Short list of Consignee*

Other than these, there are so many customers around the world as well as in Bangladesh who are actively engaged in business with MSC.

Besides, for smooth business procedure big companies sometimes give their product to FFW to handle it from origin country to destination country and carrier arranges the transportation facilities. Here, MSC also set their footmark and providing best service even to those Freight Forwarders. Some of the renowned FFW who are having business relationship with MSC is given below:

<b>Origin Country</b>	<b>Freight Forwarder</b>
United State of America	Expeditor International
United Kingdom	Ceva Logistics
Bangladesh	MGH
Germany	DHL
United Kingdom	FedEx
Germany	Kuehne + Nagel International
Denmark	DSV
Germany	DB Schenker
Bangladesh	Mars Freight Bangladesh Ltd
Kuwait	Agility Logistics
Japan	Yusen Logistics Co.
Japan	APL Logistics

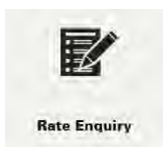
**Table 8: Short List of FFW**

This is how MSC Bangladesh LTD is adding value in their supply chain process through their branding, marketing and sales strategy.

## **5.7 Customer Service:**

To satisfy their customer with different queries like giving a basic idea about shipment rate, vessel schedule or track a shipment; MSC provide exceptional customer service to tackle the customer's questions and difficult any situation.

### **5.7.1 Rate Enquiry:**

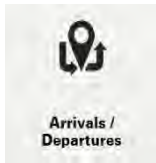


A customer can easily get information about cargo rate from MSC global website by providing few information. This is by far the fastest and an easy way to make single or multiple freight rate enquiries. In order to get the information, a customer need to provide some information like

- Description of the cargo

- What type of container is needed for the cargo
- Volume of the cargo
- Routing information (POL & POD)

### 5.7.2 Arrivals/Departures:



Through the global website of MSC, customer can find out the arrival and departure time of mother vessels. By analyzing the time frame of the vessel, customer can prepare their cargo beforehand and can send for the stuffing. This tool provides different time and date for different vessels so that customers can pick vessel and time according their choice

Next Departures: Felixstowe, United Kingdom (GBFXT)

Vessel	Voyage	Service	Departure Date	Details
MSC VANDYA	QL945E	LION - JAGUAR	Thu, 14 Nov 2019 16h	<a href="#">VIEW</a>
MSC KALINA	QH946E	SHOGUN - PEARL	Sat, 16 Nov 2019 00h	<a href="#">VIEW</a>
MSC MARTA	NT945A	NWC TO/FROM TURKEY - MAIN SERVICE	Sat, 09 Nov 2019 22h	<a href="#">VIEW</a>
MSC MADRID	NT944A	NWC TO/FROM TURKEY - MAIN SERVICE	Mon, 04 Nov 2019 02h	<a href="#">VIEW</a>
MSC BHAVYA	NM946A	NWC TO/FROM TURKEY - MARMARA SERVICE	Fri, 15 Nov 2019 07h	<a href="#">VIEW</a>

DATE: Sat, 09 Nov 2019

Chittagong, Bangladesh (BDCGP) to Montreal, Canada (CAMTR)

Vessel	Voyage	Service	Terminal	Service Type	Departure Date	Transit	Arrival Date	
OEL COLOMBO	SC947R	CHITTAGONG FEEDER	CHITTAGONG CONTAINER TERMINAL	TRANSHIPMENT	Thu, 21 Nov 2019	32 days	Tue, 24 Dec 2019	<a href="#">BOOK</a>
OEL COLOMBO	SC949R	CHITTAGONG FEEDER	CHITTAGONG CONTAINER TERMINAL	TRANSHIPMENT	Thu, 05 Dec 2019	39 days	Tue, 14 Jan 2020	<a href="#">BOOK</a>

**Figure 22: Example of Arrival/Departure Time**

### 5.7.3 Documentation:

Documentation is a key factor to offer quality customer service which add value and enhance customer satisfaction. For liner business, documentation is one of the most important activities which gets utmost priority to complete each and every working day. It is necessary to provide proper, correct and up-to-date information in order to prepare documents for the shipper, FFW and consignee as well as for concern authority to avoid any sort of difficult circumstances.

In liner trade, Export/Import Documentation, LC, Stuffing Report, issue Bill of Lading, provide Advising Mail etc. are considered as key function of documentation process. However, MSC Bangladesh Ltd follows few procedures to provide enhanced customer service.

- **Export/Import Documentation:** It is a receipt of acceptance of goods that will be shipped or will be unloaded.
- **Stuffing Report:** Stuffing report is related with export documentation. When a cargo is booked for a particular destination; shipper/FFW gets the empty container and load it with cargo in ICD or in the port and sealed it. Then, a stuffing report is prepared for further documentation procedure. MSC maintains transshipment port wise stuffing report. it includes various information such as inland container depot name, stuffing date, FFW-consignee-shipper name, cargo related information (vgm, type of commodity, weight, BL-Booking no, EFR no, container and seal no, container size, package type and package amount), port of discharge and so on.
- **Advising Mail:** Customer service personnel sends advising mail to ffw/shipper that includes feeder and mother vessel name, ETB-ETA-ETD date and time, necessary instruction for further fees, an excel file that provides shipper wise specific cargo details.
- **BL:** BL is the main document in liner business. It is a legal document issued by the carrier to shipper that includes type, quantity, shipper-consignee, destination and other necessary information. It is the legal document of –
  - i. Receipt of goods in origin country
  - ii. Delivery order in the destination
  - iii. Document of title of goods
  - iv. Contract of Carriage

In addition, MSC provides Original BL (which is the standard of international Shipping and basic process of freight operation), Telex BL (it means shipper will not send the BL to consignee rather they will surrender it to the carrier company and carrier company will inform the destination port. It actually saves the time and in any unwanted situation this procedure helps), Express BL (it is also known as Seaway BL; which represent that shipper in advance will release the responsibility of cargo and carrier will take the responsibility and will send a copy to shipper and consignee when cargo is shipped on board).

In short, the BL process is –

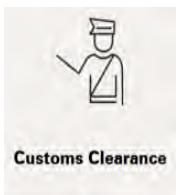


- CS team update the mother vessel schedule on a weekly basis and maintain the transshipment port also which means for three ports, MSC maintains three mother vessel schedules. As a result, any time any shipper or consignee can get the information about mother vessel and they get to know the route of the vessel as well. For example:

FDRVSL	VOYAGE	CUT OFF	ETB CGP	ETD CGP	ETA SIN	MOTHER VESSEL	VOYAGE	ETA SIN	ETD SIN	PORT SAID			
										EAST	YARIMCA	ISTANBUL	TEKIRDAG
										12 days	16 days	18 days	21 days
IBNALABBAR	177S	25-Sep	26-Sep	29-Sep	4-Oct	MSC TERESA	FT939W	9-Oct	9-Oct	22-Oct	26-Oct	29-Oct	1-Nov
TBA	TBA	28-Sep	29-Sep	2-Oct	7-Oct								
OEL HIND	1915S	30-Sep	1-Oct	4-Oct	9-Oct	MSC AMSTERDAM	FT940W	16-Oct	16-Oct	29-Oct	2-Nov	5-Nov	8-Nov
TBA	TBA	2-Oct	3-Oct	6-Oct	11-Oct								
TBA	TBA	5-Oct	6-Oct	9-Oct	14-Oct								
TBA	TBA	7-Oct	8-Oct	11-Oct	16-Oct								
TBA	TBA	9-Oct	10-Oct	13-Oct	18-Oct	MSC LA SPEZIA	FT941W	23-Oct	23-Oct	5-Nov	9-Nov	12-Nov	15-Nov
TBA	TBA	12-Oct	13-Oct	16-Oct	21-Oct								
TBA	TBA	14-Oct	15-Oct	18-Oct	23-Oct								
TBA	TBA	16-Oct	17-Oct	20-Oct	25-Oct	MSC SAVONA	FT942W	30-Oct	30-Oct	12-Nov	16-Nov	19-Nov	22-Nov
TBA	TBA	19-Oct	20-Oct	23-Oct	28-Oct								
TBA	TBA	21-Oct	22-Oct	25-Oct	30-Oct								
TBA	TBA	23-Oct	24-Oct	27-Oct	1-Nov	MSC TARANTO	FT943W	6-Nov	6-Nov	19-Nov	23-Nov	26-Nov	29-Nov
TBA	TBA	26-Oct	27-Oct	30-Oct	4-Nov								
TBA	TBA	28-Oct	29-Oct	1-Nov	6-Nov								
TBA	TBA	30-Oct	31-Oct	3-Nov	8-Nov	MSC BARI	FT944W	13-Nov	13-Nov	26-Nov	30-Nov	3-Dec	6-Dec
TBA	TBA	2-Nov	3-Nov	6-Nov	11-Nov								
TBA	TBA	4-Nov	5-Nov	8-Nov	13-Nov								
TBA	TBA	6-Nov	7-Nov	10-Nov	15-Nov	MSC LONDON	FT945W	20-Nov	20-Nov	3-Dec	7-Dec	10-Dec	13-Dec
TBA	TBA	9-Nov	10-Nov	13-Nov	18-Nov								

Figure 23: Example of Vessel Schedule

#### 5.7.4 Customs Clearance:



It is one of most important things in exporting and importing which is to satisfy official customs formalities and every regulation so that cargo can cross international border. Having worked thoroughly with international customs authorities for many years, MSC has the expertise on customs clearance which provides the customers a fast, efficient procedure of their cargo to meet the border formalities and enter into the destination country

As a result of all the process under customer service, clients are getting maximum service from MSC management. Clients are getting up-to-date information, receiving help in terms of customs and shipment query, receiving advance information about vessel; ultimately this

structured customer-oriented system formulating a benchmark that has been accepted by the customers.

## 5.8 Port and Terminal:



One of the strongest factors to endure in transportation and logistics industry is that network or distribution coverage. The more region a company can cover, the more sustainability the company will get in that particular industry.

Mediterranean Shipping Company has remarkable global port coverage. MSC operates in Asia-Pacific region, Middle East region, Europe region, Africa region and America region. MSC fleet has more than 520 vessels, sails through 200 different routes between 500 ports in 155 countries. MSC has established their own container terminals in Africa, Australia, Brazil, Europe, India, The Middle East and The United States of America. As a result, MSC can handle a lot of shipment in a short period of time. Through TiL (Terminal Investment Limited); a subsidiary of MSC group, has invested in 62 container terminals that handles 53 million TEUs per year. MSC has market share in Antwerp, Singapore, Bremerhaven, Rotterdam, Long Beach, Newark and Ningbo.



Figure 24: Terminals

The benefits of these investment are:

- For maximum customer service and meeting customer demand
- Offering on time shipment
- Warehousing and storage benefit and minimizing inventory cost from the side of shipper/consignee
- As an investor MSC gets priority in transshipment and container

- Inland depot, Port and Terminal coverage enhance the efficiency of liner shipping

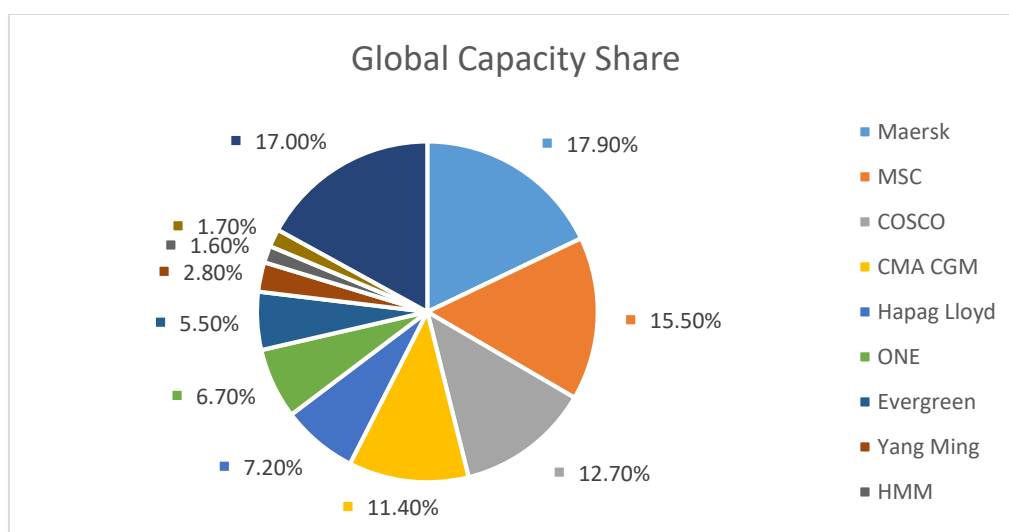
In Bangladesh, MSC has plan to invest in Pangaon River Terminal. Nevertheless, in short period of time of its business, MSC has created good impression with inland depot and port terminal; hence, MSC is getting priority and providing better service to customer.

## Chapter 6

### Key Assessment and Observation of Overall Service and Industry

#### 6.1 Capacity and Market Share:

It has been proved that MSC Mediterranean Shipping Company is one of the world's top leaders in container shipping industry and this company is generating values through different ways and enhancing their service supply chain. Their value creation in this industry is quite remarkable. Globally MSC is the 2<sup>nd</sup> largest company in term of capacity sharing in global trade. This position they have obtained because of their strategic business process for instance



**Figure 25: Capacity Percentage (Source: MSC Report)**

their “Warehousing and Storage” facilities confirm the security of the cargo and help the clients in reducing the inventory carrying cost and increase the efficiency of handling containers and capacity of vessel. For USA West Coast from Bangladesh, tender account is increasing. The next target of MSC is to grab DCA of USA WC from Bangladesh because OCA has been grabbed already. For Europe market, MSC's share is 17.3% whereas the share of CMA and COSCO are 10.9% and 7.5% respectively. MSC's share may increase in upcoming years due to increased volume from DCA and tender account.

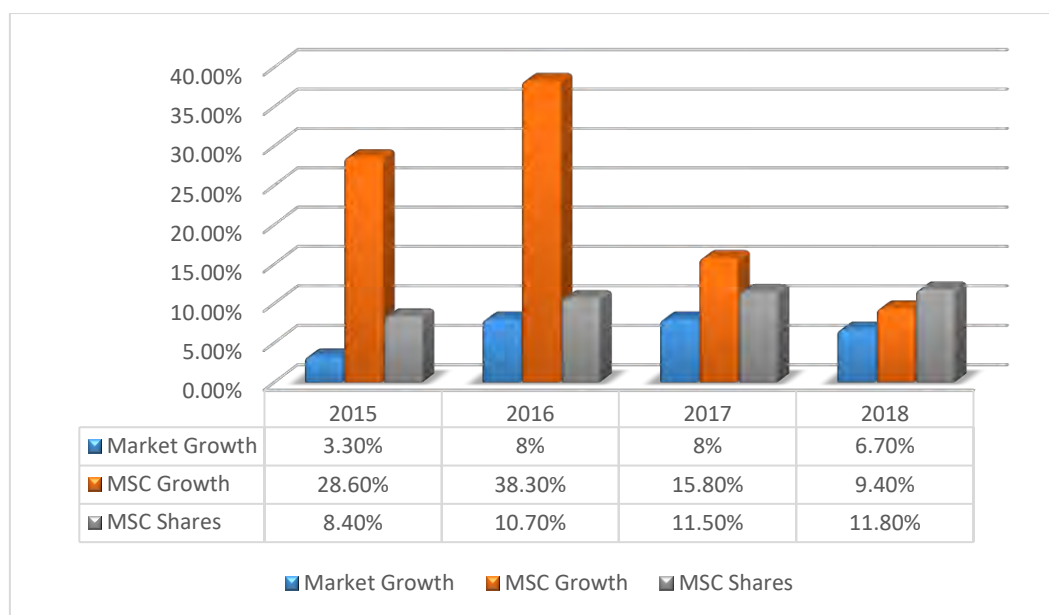
Furthermore, this company globally has attained a steady economic growth. Only Maersk Line was ahead of MSC in 2016 and 2017 fiscal year.



Company Name	2017	2016
Maersk Line	4.5%	3%
MSC	3.4%	2.6%
D'Amico Int. Shipping	3.2%	2.5%
Hapag Lloyd	1.5%	0.6%
COSCO	Nil	Nil

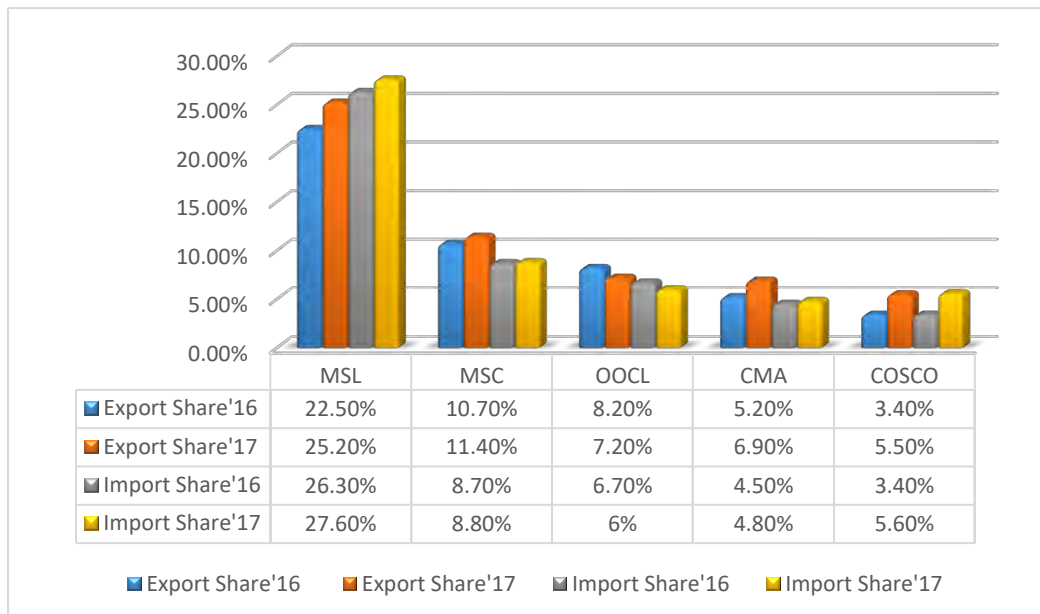
**Table 9: Global Economic Growth 2016 & 2017**

Particularly, in export/import business, this liner shipping company has achieved tremendous growth in Bangladesh. The age of operation of this company is not very old in Bangladesh yet they have got a stable growth. Here is the growth and market share of last 4 years in Bangladesh of MSC:



**Figure 26: Percentage of Growth (Source: Internal Report)**

In comparison with other liner shipping companies, MSC ranked 2<sup>nd</sup> in export/import operation from Chittagong Port in 2016 and 2017.



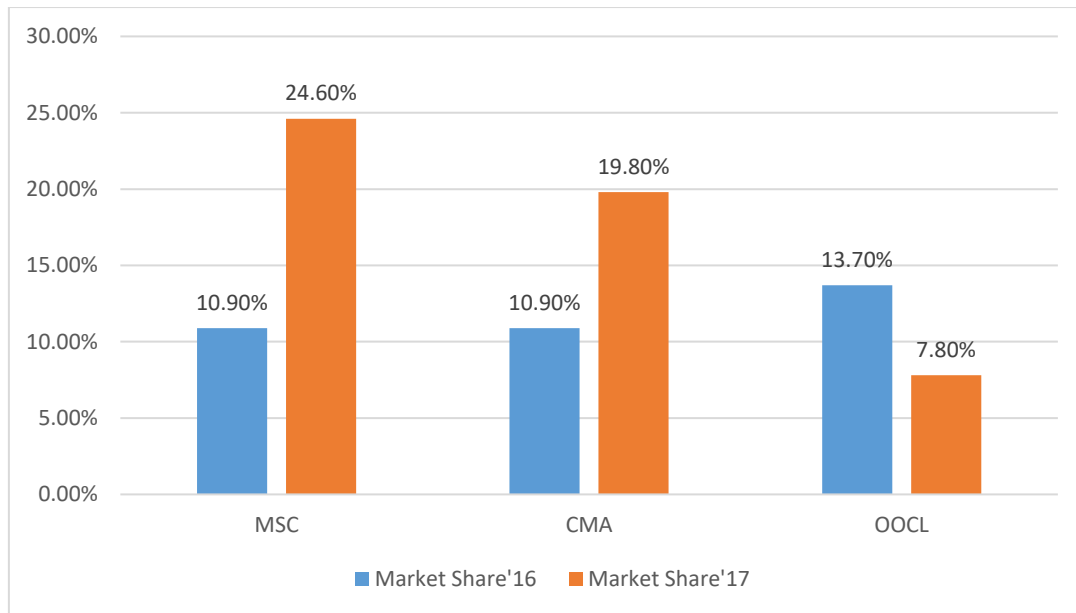
**Figure 27: Export/Import Share CTG Port (MSC Report)**

## 6.2 Container Availability and Turn-Around Days:

As China is the highest importer country for Bangladesh, the inbound of imported cargoes are helping MSC to meet the demand of tender accounts for exporting by 40HC containers. In addition, MSC’s “Turn-Around Days” of container is pretty notable compare to other liner shipping companies who are in this business for a long time as well as doing business in Bangladesh. For example, the average turn-around days of MSC’s container is 3.5 to 4 days. On the other hand, except Maersk Line; the average turn-around days of other companies is 5 days minimum. It means that MSC can provide containers frequently.

Another important criterion to measure the performance is that “Empty Pick-up to Load Full”. It means that how long it takes to pick an empty container and load it fully with cargo. In this case, MSC takes only 4 to 4.5 days to fill up a container whereas other take more than 5 days. As a consequence of these two conditions, terminal storage cost has been reduced by 55% by arranging faster movement of empty containers.

Morover, in term of reefer cargo shipment from Mongla Port, MSC shows considerable improvement to place themselves in overall market share.



**Figure 28: Reefer Cargo Shipment from Mongla**

This analysis shows that MSC is on the right track to do business in Bangladesh and it also proves that this company generating values based on their services and contributing in economy of Bangladesh.

### **6.3 Reliability and Responsiveness:**

In transportation, reliability means moving people or goods from origin to destination successfully. In liner shipping business, as long as shipment arrives within expected time frame, company becomes more trustworthy to their customers which reflects the reliability of the company.

“Frequency of Service” is a key factor that measure the reliability of liner business. And in this case, MSC provides outstanding service with the help of their huge fleet that consist 520 vessels. The “Tracking Shipment” process shows that company is trustworthy and sincere in their operational process. At the end, all the “Documentation” process ensures the legal, customs clearance and transparency of the cargo. MSC increases inland services for remote area, in developing and least developing countries. MSC has invested large amount in efficient and sustainable freight management system. In 2018, MSC enhanced their Intra-Asia networks and developed China as a key hub. In 2019, they offer services in Malaysia, Thailand and Vietnam.

On the other hand, responsiveness in logistics and transportation means that the ability to meet customer demands and cope with market change within a reasonable time frame in order to creating competitive advantage. Customer will appreciate the company's effort if they get the response according to their demand and if it meets the time frame.

“Port, Terminal and Depot Coverage” is one of the key dimensions of MSC that proves the maximum responsiveness of MSC. Through 200 different routes, MSC cover 500 ports which is remarkable. As a result, clients are getting maximum delivery in any destination around the world. On top of it, “Intermodal Service” act as value-added service which offers the customer door-to-door delivery in any destination. Their “Last Mile Delivery” distribution network design has proved very effective and efficient for their business. Even their “Product Variety (container)” also adds value in their service supply chain and logistics management. Combinedly, these services are responding to customer's demand and meeting the requirement and getting the competitive advantage within the industry.

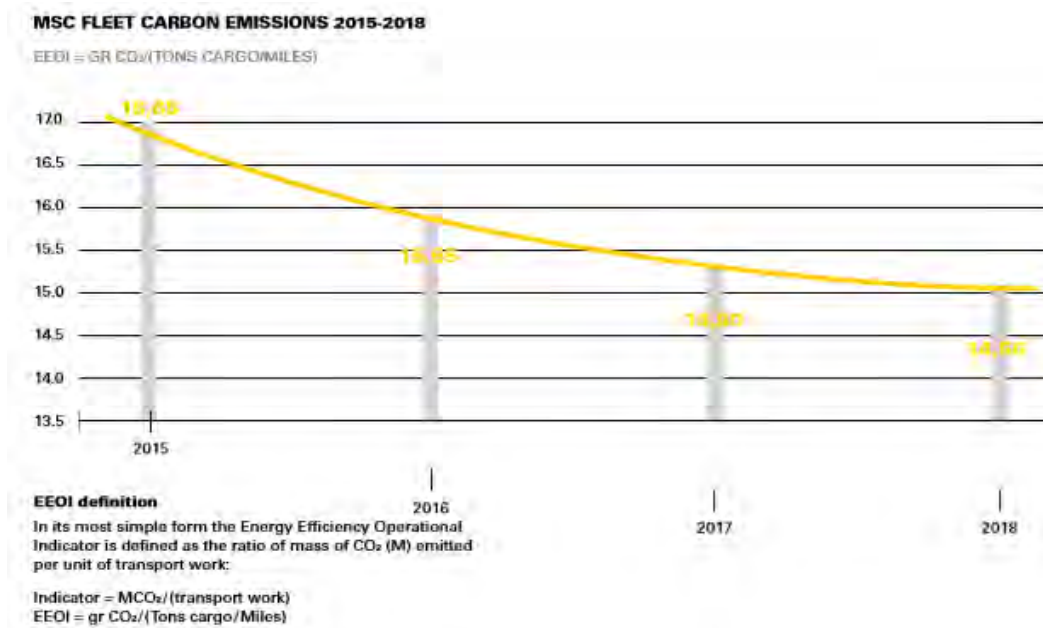
#### **6.4 Environmental Impact:**

Business is all about profit and making money out of it. But sometimes in some business, environmental issues become a question. In term of transportation sector, enviroment is a big issue. Now-a-days, in maritime industry, reducing the emission of CO<sub>2</sub> is one of the main target. International Maritime Organization (IMO) sets policy for international shipping, discouraging shippers from compromising on safety, security and environmental performance to address financial concerns, and encouraging innovation and efficiency. As per IMO policy, MSC strictly maintain:

- **SOLAS:** The International Convention for the Safety of Life at Sea (SOLAS) is some of the vital International Maritime Organization treaties. which establishes the least safety measures in the construction, equipment and operation of merchant ships. It has different chapters which describe different safety measures that needs to be followed.
- **VGM (Verified Gross Mass):** It has been decided that the VGM exceeding the maximum gross weight indicated on the Container Safety Approval Plate shall not be loaded on ships. No container without VGM can be loaded on the ship.

- **MARPOL:** The International Convention for the Prevention of Pollution from Ships; another important convention which safeguards the marine environment against ship pollution.

Since, MSC strictly follow these IMO instructions, they are constantly trying to provide a greener transport solution by minimizing carbon emission and their effort has been proved



*Figure 29: Carbon Emission (Source: MSC SMC)*

Nevertheless, according to a recent report of IMO, international maritime shipping accounts for 2.7% of annual global greenhouse gas emissions which proves that ocean shipping is the most carbon-efficient mode of transportation and produces less exhaust gas for each ton of cargo transported than air, rail, or road transport. Also, containers that are used around the world are now 98 percent recyclable.

## 6.5 Collaboration:

All the top-rated liner company now focusing on collaboration. The purpose of this strategic decision is to increase scope in the business and reduce cost on the ocean. This operational alliance in effect only at the sea but when the cargo unload from the vessel the operational alliances comes to an end. The reason of this sort of procedure is that each liner company has

different terminal agreement, different priorities, trucking-rail-barge procedure, operation and warehousing modification; hence this collaboration only applicable at sea. The top-rated liner companies are now associated in four groups and the groups are:

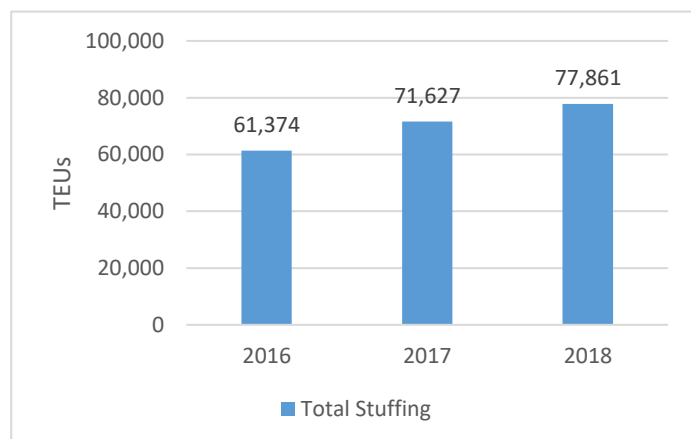
- **2M** (Maersk Line and Mediterranean Shipping Company)
- **Ocean Three** (China Shipping Container Lines Company, CMA CGM and United Arab Shipping Company)
- **The G6** (APL, Hapag-Lloyd, Hyundai Merchant Marine Company, Mitsui O.S.K. Lines, Orient Overseas Container Line and NYK Line)
- **CKYHE** (China Ocean Shipping Company, Evergreen Marine Corporation, Hanjin Shipping Company, K Line Ship Management Company and Yang Ming Group)

## 6.6 Opportunity and Threats:

### 6.6.1 Opportunity:

In the Liner business, opportunity just depends on how a company is taking strategic decision and focusing on value creation; because all the liner shipping company provides a basic service that is transportation of cargo. However, within the supply chain and logistics management, proper strategic decision may create opportunity and improper managerial decision may lead to loss in business.

For illustration, all the trade has been dropped for OOCL in 2016 and 2017 and also this company faced merger threats because of their low profit. This situation was an opportunity for MSC. For YML, poor financial condition leads the customer to switch the service and MSC has got an opportunity to establish their business more strongly. When APL and CMA merge themselves as one, then they faced company policy related issues and again, MSC got the chance to go further. These opportunities have



**Figure 30: Stuffing Amount (Source: Dhaka Office)**

reflected in their cargo stuffing positively. As they offer services in Malaysia, Thailand and Vietnam in 2019, their opportunity to expand the business has increased.

### **6.6.2 Threat:**

From one way, merger between more than one companies might be difficult but in another way it could be beneficial. For example, because of the merger between COSCO and China Shipping; MSC faced initial threats in term of cargo volume booking. On the other side, as a number one shipping line MSL has got better tender account and natural growth in business; for which MSC faced pressure to compete head to head in this industry. Again, NYK went for merger for better exposure in the industry and capture the market; here, MSC faced another challenge. Another threat that faced by almost all the companies is that blank sailing; it happens when there is lack of trade between shipper and consignee or in term of factory closures.

However, MSC's strategic decisions and proper resource allocation helps them to create competitive advantage and compete with other shipping line, which results in better exposure in the customer level.

## Chapter 7

### Conclusion:

It is clear that container shipping industry is much more concentrated and sustainable. Even in developing countries like Bangladesh, it has scope and possibilities to have a steady growth. Logistics infrastructure is developing and business growth of Bangladesh is quite impressive. Industry leaders, private sector as well as government are making substantial investment in expand of port capacity and necessary facilities.

From the perspective of logistics support by Bangladesh government; the authority already set to establish two more terminal “Potenga Container Terminal” and Laldia Terminal” to cope with 3 million (expected) TEUs by the year of 2021. This will be a great opportunity not only for MSC but also for other liner companies to increase their service and facility. Karnaphuli Container Terminal also will be modernized by help of World Bank. At present, CTG Port, Mongla Port, Pangaon River Terminal and ICDs (discussed in 4.3.2) are tackling the overall container trade business.

Nevertheless, the survival of a business relies on the performance of supply chain and how much the process can create value for the customer. A fragmented SCM cannot provide the customer what they need, where they will find it. Ultimately, company loss the customer and its potential. On the other side, a well-structured supply chain process can give the company competitive advantage and can help the company to compete with competitors in the industry.



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