THE SHIPPING CONTAINER CRISIS

Abstract

Shipping containers play an immense role in international trade. It brought about significant changes in cargo transportation by significantly cutting down cost and time. The global lockdown induced by the pandemic has created disruptions in container movement. Containers got stagnated at major ports waiting for customs clearance. The entire container clearance operation was slowed down for want of manpower and this created one of the worst congestions in recent years. Container shortage has led to increase in freight rates and some of the shipping lines have started making exorbitant profits utilizing this opportunity. The impact is more on India as many shipping lines have announced blank sailings to Indian ports. This article provides a glimpse of the grim situation that prevails and outlines the areas that require attention from the Government

Keywords: shipping containers, blank sailings, freight rates

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I. INTRODUCTION

International trade heavily depends on shipping containers. By drastically reducing cost and time, it brought about substantial changes in how cargo is transported. Movement of containers has been hampered by the pandemic-induced worldwide lock down. At busy ports, containers sat idle while waiting for customs clearance. Due to a lack of staff, the entire container clearance process was slowed down, leading to one of the biggest traffic jams in recent memory. Freight costs have increased as a result of the container shortage, and certain shipping companies have begun to benefit enormously from this situation. As numerous shipping lines have announced blank sailings to Indian ports, India will be more affected than other countries.

The pandemic that struck during the early 2020, forced people and businesses to restrict their activities. This sent the world economy reeling. From Asia to Europe many offices closed, and manufacturers either slowed down or stopped operations. Layoffs increased, and compensation plans changed. People's purchasing power, which is the driving force behind the economy curtailed. It was anticipated that demand would decline significantly as production decreased and fewer individuals had sufficient income to spend. But the pandemic had only changed the demand from one commodity to other. People spent money on office furniture, technology, and kitchen equipment rather than on covid-restricted activities like eating out and attending events.

Simply put, the pandemic sped up the growth of online commerce that had been taking off in recent years. A significant shift was made towards online buying. Amazon sold 57 % more goods from April to June 2020, when the first wave of the virus began to spread. In India, Flipkart's FTU (First- Time Users) sector saw growth of 50%. Additionally, there was a change in the way people shopped online, there was a higher purchase of necessities like groceries, food, and medicines which was not so earlier

But soon, a far more complicated situation unfolded, which challenged the global supply chain. There was a dramatic increase in demand for surgical masks, suits, sanitizers, and a variety of other protective supplies in 2020, when the epidemic was at its worst. Majority of these products were produced in China. Half of all protective masks were produced in the nation. To meet the rising demand, Chinese industries were on toes, and their production levels reached all-time high. Interestingly, even areas that previously had little or no trade with China, such as West Africa, began importing from China. Shipping containers that were used to transport the Chinese supplies to the rest of the world got piled up in many different locations across the world. Loading and unloading took a very long time in ports, as there were too many ships arriving at once and the ports were also working with less staff. Due to shortage of truck drivers to transport containers to warehouses, unloaded containers stacked up on ports became a common sight. Eventually there was shortage of empty shipping containers in the country that needed them the most (ie) China. The cost of shipping a container from Shanghai to Los Angeles increased tenfold as the volume of orders outpaced the supply.

II. CONTAINERISATION – THE HERO OF GLOBALISATION

Containerization is a development in the shipping sector. Before the arrival of the containers, the cargo was handled by hand as break bulk and was moved using pallets and gunny bags. Due to the numerous handling steps, the process was extremely time-consuming and had a significant risk of damage and accidents. Malcolm McLean created and patented the first conventional shipping container (USA, 1956). As he watched the tiresome process of loading and unloading, he realised how much the shipping business would change if cargo transfer procedures were consistent. He began testing this and created what is now known as the shipping container.

The Ideal X, the first container ship in history, successfully transported 58 containers from Port Newark to the port of Houston In April 1956, the world’s first container ship, the Ideal X sailed from Port Newark to the port of Houston successfully carrying 58 containers [1]. These containers brought about a revolution in freight transportation since they were sturdy and simple to use. The safe and secure transportation of the cargo decreased theft and damage during all phases of transportation. The use of containers has significantly altered port infrastructure around the world and reduced the amount of labour needed for loading and unloading. Men were replaced by cranes, and ports modified to make room for bigger ships and loading docks. By significantly reducing shipping time, this invention has decreased the cost of international trade and boosted its pace.

The dimensions of these containers quickly needed to be standardised so that ports all around the world could be outfitted uniformly to handle containers. Containers might easily fit onto a variety of transportation methods with uniformity. The container sizes were established by the International Organization for Standardization (ISO), and while there are other standardised sizes available, the TEU (Twenty Foot Equivalent Unit) and FEU (Forty Foot Equivalent Unit) containers are the most widely utilised. Thus, standardisation has aided in the achievement of efficiency and economies of scale in the transportation sector.

Most shipping containers are either owned by a shipping line or leased by a container leasing company. A very tiny fraction of shipping containers is also owned by the shipper. The container identification number on the container typically indicates who owns it. It is common to find huge shipping companies like Maersk having their own containers. This is a cost- effective method for these businesses to be able to transport goods without needing to lease out containers. However, occasionally logistics or other issues force shipping companies to rent containers to meet demands. Leasing containers can help shipping companies cut expenditures on storage, repositioning, and repairs and upkeep. Companies that rent containers to shipping lines are also available.

Building containers is the sole business of container leasing businesses, who then rent them to international shipping lines. They maintain demand locations with a supply of specialised and standard containers throughout the world. Intermodal containers are used in their activities, which also include acquisition, leasing, re-leasing, and sales. About 52% of the world's equipment pool is owned by container leasing businesses. The market for container leasing also hit \$5,150 million in 2019. By 2024, this is projected to increase to \$6,100 million [2].

Some smaller transportation companies simply rent containers. They avoid owning their own containers because they do not want to pay the associated costs. Container leasing businesses are helpful to these shipping lines. Additionally, shippers themselves own a small percentage of containers. Regular exporters that need specialised packaging for their goods use it. Of the total number of containers in use worldwide, these shipper-owned containers make up about 2%.

III. THE CONTAINER NETWORK

Almost anything and everything can be transported in a shipping container, including perishables like fruits and vegetables, consumer goods like shoes and textiles, as well as flammable and hazardous items for industrial use. Once loaded, these containers undergo a thorough inspection process. From its starting point to its final destination, a shipping container travels as follows [3]. Three main parties are involved in the container shipping industry: the importer, who wants to receive cargo from another country, the exporter, who wants to sell the cargo and send it to the importer, and the shipping company, which delivers the cargo by acquiring it from the exporter and sending it to the importer. In addition, there are various service providers including ports, trucking companies, shipping agents, freight forwarders, etc.

1. **On exporter’s side:** The exporter will first choose a specific shipping firm whose container will arrive at its factory for freight loading once the consignment is prepared. The shipping business may be the owner of this container or it may have leased it. The exporter will employ Complete Container Load (FCL) if the cargo is substantial enough, in which case a full 20- or 40-foot container will be reserved. The shipping method he will utilise is called a "Less than Container Load" if the amount of cargo is less (LCL). For space used within a container, LCL charges either per cubic metre or per metric tonne.

   There are freight forwarders who help with the transportation of cargo for both importers and exporters. They obtain the containers from the shipping company and deliver them to the exporter for the cargo to be filled, stuffed, and sealed. After loading, the containers are sealed, and the exporter is given an identical number or a specific id so they can trace their goods. The IMDG (International Maritime Dangerous Goods) containers are used when the cargo to be carried is hazardous in nature, such gas or a toxic chemical. The IMDG Code governs the shipping of dangerous products. Reefer containers will also be utilised if the cargo needs to be kept at a specific temperature or is perishable.

   In order to move the container from the exporter's warehouse or factory to the chosen shipping port for loading into the vessel, the freight forwarder will then make arrangements for intermodal transport. In order to move the containers inside the port warehouse or storage facility, the exporter's agent, a shipping agent, completes all port documentation, customs checks, and conducts the final examination of the container. After giving the documentation and the mate's receipt to the shipping line, the shipping agent will also take the bill of lading from them. The exporter will now receive the certificate of origin from the chamber of commerce.

The weights of the containers are measured in the port, and entries are made in accordance with those results. The containers are placed in the port so that they can be readily removed in accordance with the timetable of their designated vessel. The container is now prepared for loading into the ship.

2. **On the vessel:** The cargo containers that will be loaded onto the ship in a specific port are already communicated to the ship's master. The chief officer provides the cargo planners with information on the ship's present load status, including the amount of fuel and water on board, and they use that information to create the cargo loading plan. When the ship docks, container port trucks bring the container from the nearby port storage facility. Now, the enormous port cranes that lift the container from the truck and transfer it to the ship load it in accordance with the cargo plan. The container can be kept on the deck or in the cargo hold of the ship.

Extra lashing is supplied for all deck containers so that they won't come undone and tumble overboard when the ship is in choppy waters. Workers on the shore, often known as stevedores, secure containers. The ship will now set sail for the next designated port after loading is complete. The ship officers are in charge of monitoring the containers throughout the voyage. Every so often, cargo lashing is examined to make sure that every container is securely fastened.

3. **On importer’s side:** The container will be moved to the port bay or warehouse using the port container trucks after the ship has arrived at the destination port and been unloaded by the port cranes. The importer's representative will then give the port and shipping line the bill of lading and other papers. The cargo will be transferred through intermodal transportation to the importer's warehouse where the container is unloaded when the importer's representative or the freight forwarder has obtained possession of the shipment. Now that the empty container has been delivered to the container yard authorised by the shipping line, an inspection will be done to look for any damage or the need for cleaning, among other things.

The container will be stacked and made ready for another export cargo after repairs and cleaning are finished. A container that has been leased may be off-hired there and then delivered again. Through this unnoticed network, which propels global trade, the entire planet is interconnected. Any interruption to this network will have a significant effect on stakeholders in global trade. The current pandemic has resulted in significant delays in the removal of containers from significant container terminals, creating the worst bottleneck ever. This was brought on by a severe lack of personnel for customs clearance, handling equipment, drivers, etc.

Yantian, China's largest container terminal, was forced to close in 2021 as a result of the pandemic, which caused severe disruption. Chinese citizens own the majority of the world's shipping firms, with COSCO ranking third among them in terms of size [4]. They operate the most container terminals in the world with 51, and they handle 126.8 million TEUs. These containers are being sent back to China at a time of crisis, which adds to the scarcity.

4. **The impact of container crisis on India:** None of the top ten shipping corporations in India are represented, hence the country's exports and imports are carried out by foreign ships. The problem right now is that a sizable portion of containers are owned by Chinese, and freight from China to the US and Europe has increased dramatically as a result of shipping companies favoring this route. Additionally, the ships that visit Indian ports are refusing to take export cargo, which has caused cargo to become stranded at ports. Many shipping companies also cancel contracts without warning, and exporters are required to make reservations immediately.

The cost of shipping 20FT and 40FT containers has increased due to a lack of containers. When the Bill of Lading is released, the shipping lines and freight agents charge higher exchange rates. Members must also make additional payments in order to make reservations on the present ship. The table below shows how much the costs for shipping goods by ocean have climbed.

Table 1: Freight Rates Compared between March 2020 and August 2021 from Cochin & Mundra Ports

Origin	**Destination**	**Freight 2020 March**		**Current Rate**		**Increase in value**		**Increase in %**	
		20ft	40ft	20ft	40ft	20ft	40ft	20ft	40ft
Cochin	Melboune	$650.00	$800.00	$5,200.00	$8,800.00	$4,550.00	$8,000.00	700%	1000%
Cochin	Montreal	$1,750.00	$ 2,700.00	$9,000.00	$ 12,000.00	$7,250.00	$9,300.00	414%	344%
Cochin	Hamburg	$550.00	$750.00	$6,200.00	$7,300.00	$5,650.00	$6,550.00	1027%	873%
Cochin	Felixstowe	$500.00	$750.00	$6,200.00	$7,300.00	$5,700.00	$6,550.00	1140%	873%
Cochin	Kobe	$225.00	$550.00	$750.00	$1,400.00	$525.00	$850.00	233%	155%
Cochin	Yokohama	$225.00	$550.00	$750.00	$1,400.00	$525.00	$850.00	233%	155%
Cochin	Tokyo	$225.00	$550.00	$750.00	$1,400.00	$525.00	$850.00	233%	155%
Cochin	Penang	$150.00	$300.00	$725.00	$1,100.00	$575.00	$800.00	383%	267%
Cochin	HO chi Min City	$225.00	$375.00	$900.00	$1,500.00	$675.00	$1,125.00	300%	300%
Cochin	Rotterdam	$500.00	$750.00	$6,200.00	$7,300.00	$5,700.00	$6,550.00	1140%	873%
Cochin	Helsingborg	$850.00	$ 1,000.00	$7,200.00	$8,800.00	$6,350.00	$7,800.00	747%	780%
Cochin	Los Angeles	$3,000.00	$ 4,500.00	$9,800.00	$ 12,000.00	$8,600.00	$10,400.00	717%	650%
Cochin	Baltimore	$1,900.00	$ 2,800.00	$9,500.00	$ 13,000.00	$7,600.00	$10,200.00	400%	364%
Cochin	New York	$1,300.00	$ 1,600.00	$9,000.00	$ 12,000.00	$7,700.00	$10,400.00	592%	650%
Cochin	Cape Town	$800.00	$ 1,200.00	$8,000.00	$ 12,000.00	$7,200.00	$10,800.00	900%	900%
Cochin	Durban	$800.00	$ 1,200.00	$8,000.00	$ 12,000.00	$7,200.00	$10,800.00	900%	900%
Mundra	Montreal	$2,100.00	$ 2,900.00	$9,500.00	$ 12,000.00	$7,400.00	$9,100.00	352%	314%
Mundra	Hamburg	$650.00	$850.00	$6,200.00	$7,300.00	$5,550.00	$6,450.00	854%	759%
Mundra	NewYork	$1,300.00	$ 1,600.00	$9,000.00	$ 12,000.00	$7,700.00	$10,400.00	592%	650%
Mundra	Baltimore	$1,900.00	$ 2,800.00	$ 10,000.00	$ 11,500.00	$8,100.00	$8,700.00	426%	311%
Mundra	HO chi Min City	$210.00	$350.00	$900.00	$1,500.00	$690.00	$1,150.00	329%	329%
Mundra	Yokohama	$300.00	$435.00	$800.00	$1,500.00	$500.00	$1,065.00	167%	245%

Source: The Great Shipping Crisis of 2021, a report jointly presented by All India Spices Exporters Forum –AISEF, Kochi Indian Spices & Foodstuff Exporters' Association –ISFEA, Mumbai Federation of Indian Spice Stakeholders –FISS, Unjha 24 August 2021

It is evident from the above table that only a few exporters of high value goods can afford the current substantial increase in freight prices. Some of the largest shipping firms have benefited from the crisis. Their earnings have reached a record level, as seen in the table below, and they have created a cartel to control the freight rates.

Table 2: Financial results of major shipping liness

	Revenue			Operating Profit			Operating Profit Margin		Net Profit		
Carrier	**2020**	**2021**	**%**	**2020**	**2021**	**%**	**2020**	**2021**	**2020**	**2021**	**%**
Maersk Group[5),8)]	7,230	9,478	31%	348	2,700	676%	4.8%	28.5%	n.a.	n.a.	n.m.
CMA CGM[2),5),8)]	5,456	8,586	1%	797	2,975	3%	0	0	56	2,090	36%
COSCO SHIPPING Holdings[6),9)]	4,613	9,255	101%	n.a.	n.a.	n.m.	n.a.	n.a.	41	2,356	5,646%
Hapag-Lloyd[5)]	3,684	4,903	33%	176	1,539	774%	4.8%	31.4%	27	1,451	5,274%
ONE[3)]	11,865	14,397	21%	n.a.	n.a.	n.m.	n.a.	n.a.	105	3,484	3,218%
Evergreen Marine Corp.[1),7)]	1,442	3,214	1%	12	1,609	134	0	1	-15	1,289	89%
HMM	1,113	2,179	96%	-2	915	45,850%	-0.2%	42.0%	-56	138	346%
Yang Ming[1),9)]	1,145	2,186	91%	8	1,021	12,663%	0.7%	46.7%	-25	863	3,552%
Zim	823	1,744	112%	97	817	742%	11.8%	46.8%	-12	590	5,017%
Wan Hai[1)]	595	1,355	128%	20	618	2,990%	3.4%	45.6%	3	519	17,200%
Average[4)]	**20,645**	**34,314**	**66%**	**659**	**9,219**	**1,299%**	**3.2%**	**26.9%**	**-37**	**7,206**	**19,754%**

Source: Alphaliner, DynaLiners; n.a. = not available, n.m. = not meaningful; 1) Local currency numbers were converted into USD using the average exchange rate for relevant financial period; 2) Container shipping segment only, excl. CEVA Logistics, Net Profit for Group; 3) Result is Q1-4 of Japanese financial year, i.e., Apr – Mar not calendar year; 4) Average excluding ONE, CMA CGM, Evergreen; 5) Operating profit is EBIT; 6) COSCO Shipping Lines and OOCL, excl. terminals; 7) Not consolidated for Evergreen Group; 8) Ocean segment only; 9) Container segment only, excl. terminals, Net Profit for Group

Source: The Great Shipping Crisis of 2021, a report jointly presented by All India Spices Exporters Forum –AISEF, Kochi Indian Spices & Foodstuff Exporters' Association –ISFEA, Mumbai Federation of Indian Spice Stakeholders –FISS, Unjha 24 August 2021

Additionally, pandemic-related transit delays have increased more than twice as much as they did in 2019 due to transshipment delays, feeder vessel delays, and transit time increases. Since clients are refusing to consent to contract revisions, many Indian exporters who have signed lengthy Cost Insurance and Freight (CIF) contracts are experiencing enormous losses. When a container is short, the entire process of picking up an empty container, packing it, and returning it takes longer than seven days, resulting in high detention fees. Normally, shipping companies give customers 14 days of free time for loading and documentation before charging detention and demurrage. However, this has now been reduced to seven days.

If the empty containers are not picked up in accordance with the given delivery order, the shipping companies now also assess cancellation fees. Last year, it was announced that import shipments with late approval will no longer be subject to detention or demurrage fees. However, this practise continues, aggravating the pandemic.

IV. CONCLUSION

In order to safeguard the interests of its exporters, the Indian government must address this issue immediately with international trade regulatory organisations and shipping lines. To stop blank sailings and additional increases in freight costs, urgent action must be taken. The scenario also highlights how far behind its worldwide rivals India is in terms of port facilities, despite having a maritime nation with a long coastline of over 7516 kilometres. The nation must develop long-term policies to support Indian shipping lines and bring them up to par with international norms. A cause for concern is the absence of any Indian shipping businesses among the top ten. It is important to build more container manufacturing facilities and to move forward quickly with the Bhavnagar facility. In order to prevent cargo transshipment, port infrastructure must also be strengthened further. The Government of India has put into action significant programmes like Marine Agenda 2020 and Maritime India Vision 2030 to advance India to the top of the world maritime industry. A lot of port development projects have also been carried out under the Public Private Partnership (PPP) model, and the country has also allowed 100 percent FDI into the port industry.

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