

**A STUDY ON THE EXECUTION OF DIRECT PORT DELIVERY IN
INDIAN PORTS**

Submitted for the partial fulfilment of the requirement for the degree of

MASTERS OF BUSINESS ADMINISTRATION

in

Port and Shipping Management

Submitted By

ADARSH B P

Registration No.: 2003304003



Under the Guidance of

Dr. A. MOUROUGANE

Associate Professor

SCHOOL OF MARITIME MANAGEMENT

INDIAN MARITIME UNIVERSITY

CHENNAI – 600119

MAY 2022

DECLARATION

I, **ADARSH B P (Registration No: 2003304003)** hereby declare the project report entitled “**A STUDY ON THE EXECUTION OF DIRECT PORT DELIVERY IN INDIAN PORTS**”, submitted by me in School of Maritime Management, Indian Maritime University, Chennai Campus under the guidance **Dr. A MOUROUGANE**, Associate Professor , School of Maritime Management, Indian Maritime University, Chennai Campus in partial fulfillment of the requirements of award of the degree **MASTER OF BUSINESS ADMINISTRATION IN PORT AND SHIPPING MANAGEMENT** is a report of original work done by me and the project report has not been submitted either in part or full this or any other university or institution for the award of any degree, diploma or other similar titles.

DATE:

PLACE: Chennai

(ADARSH B P)

CERTIFICATE
School of Maritime Management
Indian Maritime University, Chennai.

This is to certify that the project report entitled “**A STUDY ON THE EXECUTION OF DIRECT PORT DELIVERY IN INDIAN PORTS**”, submitted to the School of Maritime Management, Indian Maritime University, Chennai Campus., in partial fulfillment for the award of the degree of Master of Business Administration in Port & Shipping Management, is a record of work carried out entirely by **ADARSH B P** Reg. No. **2003304003**.

(Dr. A MOUROUGANE)

Project Guide

School Maritime Management

Indian Maritime University

Chennai campus

External Examiner:

Place: Chennai

Date: 25th May 2022

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EXECUTIVE SUMMARY

The Direct Port Delivery system was initiated after the Ministry of Commerce asked all major ports and private terminals to extend this facility at their ports. In the past, import containers were sent to Container Freight Stations (CFS), a couple of days after they were unloaded from a vessel. With DPD, importers can avoid these obstacles and import containers can be delivered to the end user directly from the port.

The Jawaharlal Nehru Port Trust, being India's largest container port by volumes handled issued a trade notice as early as February last year allowing all its Accredited Client Programme, or ACP clients to take delivery of their cargo directly at the port. Out of the total 170 odd registered clients, only 40 to 50 importers signed up for this scheme and far fewer continued to avail this scheme until 2016. India's ranking in the ease of doing business index remained at 143, far lower than any of the other developed economies. This was, therefore, the government's first attempt to implement DPD. 778 importers of over 4,000 agencies have already availed this facility and are currently taking delivery of their goods at the port directly. First the concerns raised by the container freight stations. The CFS Association, the nodal body for all the freight stations says the DPD system might dent their business with most cargo owners moving out their wares from the port directly. They argue that the freight stations are well equipped to dispatch cargo quickly thus aid in reducing the dwell time. Also, when JNPT was conceptualised, it was designed to function around the container freight station model after the Mumbai Port Trust could no longer handle box cargo for want of space and larger volumes of bulk and break bulk cargo being handled.

For an ACP client, who needed no inspection and assessment, movement of cargo out of the port was swift. So, when importers of container cargo moved to JNPT and the ACP programme was introduced, cargo was evacuated far quickly than it was at the Mumbai port. This process helped in bringing down the dwell time significantly from 20 days earlier to about 6.8 days currently. Increased usage of DPD can sufficiently strengthen the supply chain by significantly decreasing delivery time and transaction cost, especially transportation cost. Such developments would enhance competitiveness in the global market and provide a step towards ease of doing business.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION TO DIRECT PORT DELIVERY

The globalization of production and consumption and the use of shipping containers have revolutionized the way that cargo is handled and transported, enhancing the efficiency and cost effectiveness of global supply chain transportation systems. Globalization would almost certainly not have been achieved without containerization. More than 80% of global commerce trade is now transported by sea and managed by ports across the world. In 2008, the highest seaborne trade volume was recorded with 8.2 billion tons of cargo (UNCTAD, 2013).

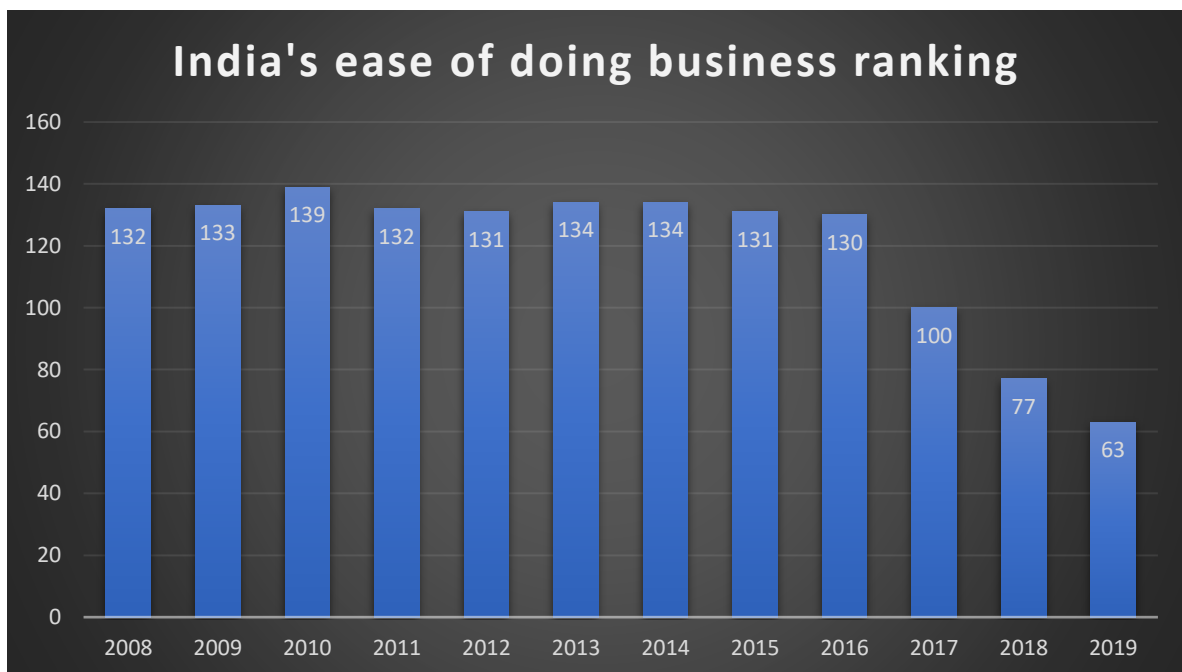
Despite the fact that the worldwide oceanic transport of holders is a moderately late action, having started scarcely fifty years prior, its development rate has been shocking. In the course of recent decades, container traffic has developed at a normal yearly rate of around 10%, with six years of back to back double-digit development somewhere in the range of 2002 and 2007 (UNCTAD, 2013). In such a specific circumstance, the matchless quality of Asian ports is reflected in port container rankings: 14 of the 20 busiest container ports are Asian, with the port of Shanghai the busiest one out of 2012, with 32 million twenty-foot equal units (TEU).

This enduring development is clarified by a few elements, for example, diminished transit time, decreased shipping costs, increased reliability and security, and multi-modality. However, the global financial crisis and subsequent economic recession halted this growth in 2009, when container trade volumes fell sharply (9%) to an overall volume of 124 million TEUs. However, a relative recovery was witnessed for a wide range of trades in 2010, leading to a global growth recovery of 12% to reach a total container trade of about 140 million TEUs.

However, given that globalization slows and most comparative manufacturing advantages are exploited, the containerization rhythm may be submerged in the mature phase in the coming years (Rodrigue and Notteboom, 2008).

Because of the complex environment that maritime transport and container ports face (constant twists and turns), ship, terminal, importer, and exporters are introducing technological innovations, increasing vessel size, and improving the efficiency of container terminal processes to meet their minimum operating costs. "Direct Port Delivery" is one such improvement that has been implemented in ports to expedite container clearance.

Direct Port Delivery (DPD) was introduced in the Indian ports taking “ease of doing business” as the prime objective. India was staying at 142nd rank in the year for the World Bank’s Ease of Doing Business 2014 survey. Later on from that year India showed significant improvements in the surveys which happened each year. India has brought in so many reforms and changes in the policies and methods to loosen up the trade happening inwards and outwards. Introduction of DPD among the ports of India is one such reform introduced. India's position in the World Bank's Ease of Doing Business 2019 study climbed 23 spots to 77 among 190 nations overviewed, making it the main nation to rank among the best 10 improvers for the second back to back year.



Indian ports have taken a number of initiatives to enhance India's place in the World Bank's "Ease of Doing Business" rankings. In 2016, the Indian government formed a committee comprised of M.D., IPA, and J.S. Customs to recommend steps to reduce the cost and dwell time of cargo leeway in ports, with a specific reference to the JNPT.

The Committee identified 42 recommendations to reduce the cost and dwell time of fares (20 points) and imports (22 points) at JNPT, Mumbai, which is the World Bank's allocated port for positioning.

Beginning with JNPT, other Major ports have additionally started usage of these suggestion The Federation of Indian Export Organizations (FIEO), which represents India's largest exporters, submitted 22 further ideas. Other major ports have begun implementing these 22 ideas, starting with JNPT. NITI Aayog has also developed an agenda for the Port-Eco System. The following are the broad characteristics of the proposed Port Eco-System parameters:

1. Time required for JNPT border compliance for both export and import containers.
2. Time required for rail container evacuation
3. Documentation compliance time – both export and import

NITI Aayog has established a set of measures to be accomplished in a time-bound way in order to work on the above objectives.

All member ports of IPA have started activity on every one of these zones alongside different offices, for example, Customs, Railways, CONCOR, CFS operators, CHAs, Freight Forwarders and so forth. The objectives of diminishing the Dwell Times are being accomplished through disentanglement of exchange forms and expanding the efficiencies transportation and compartment treatment of holders at the ports.

Import Dwell Time and Export Dwell Time are two essential parameters that have been worked on. JNPT has significantly reduced dwell time for both export and import. Collaboration between other Ministries/Offices, such as Railways, CONCOR, Partner Government Agencies (PGAs), and so on, could result in even more reductions.

1.2 SPECIFIC INITIATIVES BY PORTS

The ports' specific initiatives to promote 'ease of doing business' might be characterized as follows:

1.2.1 Removal of manual forms

At JNPT, manual Forms 13 and 11 have been phased out in favor of web-based e-Forms 13, which allow Customs authorization/endorsement to be received online as the containers are being accepted. Other major ports are taking steps in this approach as well.

1.2.2 Direct Port Delivery (DPD)

JNPT has launched Direct Port Delivery (DPD), which eliminates the requirement to transfer imported containers to CFS for Customs Out of Charge (OOC). This has resulted in significant cost savings for importers as well as a reduction in processing time. DPD customers receive online clearance. Other ports are also making similar attempts.

1.2.3 Direct Port Entry (DPE)

Direct Port Entry (DPE) for export containers has reduced the time it takes to gain Customs approval, resulting in reduced dwell time and cost savings. DPE presently accounts for over 74% of all containers exported through JNPT. Similar facilities have been established at other ports that handle container freight.

1.2.4 Container Scanners

Major ports are implementing large-format container scanners to eliminate the need for manual inspection of individual containers. Several scanners are already in use at several ports..

1.2.5 Radio Frequency Identification (RFID)

All major ports have developed a radio frequency identification (RFID) system. RFID will eliminate dual container inspections, shorten transaction times at the gate, and hence reduce dwell time and congestion.

1.2.6 Gate Automation Systems

All terminals at JNPT have implemented a Gate Automation System, which has resulted in a significant reduction in transaction time at the port gate for containers..

Similar initiatives are being taken by other ports.

1.2.7 Port Community System

The Port Community System (PCS) has been implemented, which provides a single point of contact for secure information exchange via web services / EDI messages with all major port stakeholders such as shipping agents, shipping lines, stevedores, banks, importers/exporters, CONCOR, surveyors, and major regulatory agencies such as Indian Customs, MMD, and Coast Guard. The solution also allows stakeholders to pay for port services using electronic funds. PCS is being replaced with a more advanced version

1.2.8 Integration of PCS, Customs Import General Manifest (IGM) & Terminal Operating Systems (TOS)

JNPA has successfully integrated Customs' Import General Manifest (IGM) EDI message, as well as Bill of Entry and Out of Charge messages, into its Terminal Operating System (TOS). The distribution of Direct Port Delivery (DPD) containers has been automated using EDI messages received from the PCS exchange hub..

1.2.9 E-Delivery Orders (e-Dos)

All major ports are equipped to handle electronic delivery orders from arriving ships, removing the requirement for physical handling of DOs..

1.2.10 Accommodation of Participating Government Agencies

Participating Government Authorities (PGAs) are linked agencies tasked with inspecting and clearing specific types and categories of cargo. Food Safety and Standards Authority of India (FSSAI), Controller of Drugs, Animal and Plant Quarantine, Wildlife Crime Control Bureau (WCCB), and others are among them. Importers and exporters used to have to wait 24 to 72 hours for clearance from these PGAs. JNPT has allocated office space/land to all PGAs, resulting in a sample drawing time reduction of at least 24 hours. Other major ports are also taking similar moves.

1.2.11 Helpline Facilities

Major ports have taken steps to construct Call Centers that will serve as the initial point of contact for all general questions and support services relating to port trade. Phone numbers of Call Centers are published on the websites of respective ports.

1.3 REVIEW OF LITERATURE

Vangelis Giannakos, Wenrong Lu, Duncan McFarlane, and James Hyde. (2013) The requirement for progressively adaptable, versatile and client arranged distribution centre activities has been progressively proposed as a significant issue by the present stockroom organizations because of the quickly changing inclinations of the clients that utilization their administrations. They have talked about the chances of such a methodology utilizing a genuine case of an outsider coordination's distribution centre organization and we present the advantages it can bring their stockroom the executives framework.

Ramaa A. K N. Subramanya, T. M. Rangaswamy (2012) Says in an inventory network, warehousing capacity is extremely basic as it goes about as a hub in connecting the materials streams between the provider and client. Numerous organizations have likewise altered their incentive to expand their client administration levels, which has prompted changes in the job of stockrooms.

Rene de Koster, Tho Le-Duc, Kees Jan Roodbergen (2005) Order picking has for some time been recognized as the most work serious and exorbitant movement for pretty much every distribution centre the expense of request picking is assessed to be as much as 55% of the absolute stockroom working cost. They have concentrated on ideal (inner) format plan, stockpiling task techniques, directing strategies, request bunching and zoning. The exploration around there has developed quickly as of late. In any case, mixes of the above zones have scarcely been investigated.

Adam L. Birkholz, (2004) Customer fulfilment and association aggressiveness are dependent upon executing and improving existing coordination's systems. Accordingly, warehousing has turned into a vital piece of a thorough coordination's procedure for associations. Associations are proceeding to stream line material development so as to lessen client shipment lead times and limit stock stockpiling necessities. Nonetheless, the usage of innovation into warehousing speaks to a starting which current execution and improvement openings must be continually assessed.

Jochem Springer's, (2000) this examination indicates how firms ought to oversee arranging and control related exercises in stockroom frameworks in this day and age of quickly changing client's interest. This examination initially portrays current, generally arranging and control strategies in stockroom frameworks, consequently with new ways to deal with oversee arranging and control arrangements progressively productive and to decrease reaction time so

as to keep up distribution centre exhibitions in this day and age of quickly changing client's interest. It tends to be reasoned that the principle investment funds can be determined in arranging related exercises and prescribed to put more exertion in the improvement of new models as opposed to upgrading existing ones.

Motwani, J. (2003) had examined the most significant components of lean assembling (LM), the methodologies utilized by the organization for actualizing LM, and the critical advantages that were gathered in assembling activities. Clarifies the basic components engaged with the execution of LM using a business procedure change structure. The information for this investigation were gotten through meetings, poll review and authentic sources.

Leonardi, J., and Browne, M. (2010) this investigation proposes a strategy for the count of the carbon impression of universal supply chains, concentrating on the sea area. Utilizing information from a study of real organizations looking at in excess of 25 import supply chains including UK, France and Belgium, the principle shipping qualities were recognized. This methodology empowered a correlation with be made between each inventory network section, communicated in grams of oil proportional per kilogram of item and grams of CO₂ proportionate per kilogram of item. The methodology embraced has restrictions because of the set number of supply chains for which it was conceivable to gather total information from root to goal.

Rodrigue et al. incline toward the term inland port. The term inland port speaks to inland offices of different kinds and sizes with a wide scope of calculated administrations, just as with different types of possession situated close to the generation areas. Such terminals found their application in the United States, where they spread an a lot greater zone than in Europe, with an a lot more prominent limit and compartment volume, regularly up to a few hundred thousand TEUs every year and furthermore with enormous capacity limits [30]. In Europe this term alludes to inland terminals that are situated on inland conduits, especially in Germany, the Netherlands and Belgium. Consequently, there are impediments for utilizing the term inland port in Europe since an enormous number of terminals found inland don't approach inland conduits, are not in the region of the creation territories and don't have compartment throughput like terminals in the USA.

Woxenius et al. characterized characterizations of inland terminals as indicated by their job in the multi-purpose transport arrange. They are isolated into: terminals with direct association with the port which have constrained limit and the load tasks are completed at areas near the

beneficiary of the freight or the port; terminals on significant hallways intended for speedy reloading of transport units, and the equivalent applying to terminals on fixed courses, yet just for little measures of payload; centre and-talked terminals characterized as the focal terminals through which all vehicle streams go, with enormous limit and offering productive payload dealing with. In a similar paper remote terminals are characterized as terminals with low prerequisites for freight transshipment and little limit of storerooms.

Hubbert (1994) in his examination expressed that the holder terminal industry is disregarding a time of dynamic change. To accomplish an adjustment in its business condition, holder terminals need to comprehend its client needs. One method for fulfilling its client is to fulfill the client's needs. It is pivotal in building up and keeping up an upper hand in the commercial centre. Along these lines, redesign of the significance of the consumer loyalty has developed lately. Consumer loyalty can be viewed as the substance of accomplishment in the present exceedingly focused universe of business. All things considered, consumer loyalty is progressively turning into a corporate objective and increasingly focused associations make progress toward quality in their item and administrations.

Mooy (1999) expressed that the improvement of transport and correspondence Technologies has altered generation and conveyance forms and has made the "worldwide" showcase. He focused on that it is inside this aggressive condition that shippers and representatives require productive transport benefits that can get their merchandise at the opportune spot, at the correct time, and at the correct cost. Another issue that has been exhibited in his announcement identifies with the significance of reinforcing territorial linkages among neighbouring nations in South East Asia so as to encourage exchange and Transport.

(Obed and Emeghara 2009). Couper (1986) characterized CFS as an office where packages of load are assembled and stuffed into holders. These are inland load leeway warehouses with traditions offices and they concocted containerization where singular units of payload are taken care of outside the port territory. Cargo terminals are by and large situated close to the port and huge populace focuses that guaranteed way to entryway load administration to shippers.

Wali (1996), CFSs are offices set up with the end goal of holder taking care of and capacity between the ocean ports and load focuses. A portion of the significant exercises of CFSs incorporate capacity of loaded and void compartments, stuffing of fare holders, de-stuffing or depriving of import holders just as examination and evaluation of payload by traditions specialists. The CFSs are a fundamental piece of the coordinations anchor in connection to the

development of containerized load for fares and imports. CFSs are associated with fare/import exchange both at the port of embarkation just as at the port of disembarkation.

1.4 OBJECTIVES OF THE STUDY

The major objective of this project is to provide a wide understanding about Direct Port Delivery in Indian Ports. Its operations, statistics, and consequences of DPD on other port users.

- To study the evolution and importance of direct port delivery in Indian Ports
- To study the customs clearance process flows in direct Port Deliveries

1.5 RESEARCH METHODOLOGY

Methods of Data Collection: Documentation, Past Records, Official websites.

Types of data:

Maximum efforts are made to obtain primary data through interviews and from various institutions. In case of secondary data, its degree of trueness is thoroughly studied.

1.5.5 Primary data: -

- Discussion with experts and responsible persons / authority
- Internal policies like government policies etc.
- Data collected from ports regarding the performance statistics of DPD.
- People discussions with resource personalities from the industry.
- Analysing each step in the process map to identify the areas of improvement.
- Developing process maps and reviews with logistics experts.
- Assessing the ground process flows and highlighting improvements

1.5.6 Secondary data: -

- Books, magazines & newspaper.
- Various publications of the control, state or local government.
- Technical and trade journals
- Company booklets & leaflets
- Official government websites.

Data collected from the above primary and secondary sources used to learn about material flow, processes involved in it.

1.6 LIMITATIONS OF THE STUDY

The limitations of the Project are as follows:

- Limited time-span of the project.
- Sources for collecting the data were very limited.
- Complete Information regarding the current statistics was not provided from higher officials.
- Since DPD is a newly emerged system, the primary data available with the ports was very little. The data for few years was only available.

CHAPTER 2

OVERVIEW OF THE SELECTED

PORTS

2.1 FUNCTION OF PORTS

A port is a type of marine commercial facility that includes one or more wharves where ships can load and unload passengers and cargo. A port is basically a point where merchandise are exchanged starting with one method of transport then onto the next. Ports are the monetary drivers for any nation as the majority of the exchange is done in the ports. Seaports keep on being an essential connection for access to the worldwide commercial center. The volume of freight moved by sea transportation is anticipated to drastically increment over the coming decades.

Ports, specifically worldwide seaports, work as exchange facilitators the worldwide economy. They are key instruments of trade policy in the residential economy and speak to a key interface between countries through the proficient and savvy development of merchandise, individuals and data. Ports are fundamental hubs on the world trade network and have been so since forever. They are additionally locales where various societies connect with and the cloak of sway is arranged or lifted by products, data and individuals. Worldwide exchange and venture streams have additionally given domestic political agents, used to working inside casual standards of conduct, with open doors for lease chasing and the overhauling of customer needs. More jobs will be created by improving the port infrastructure. Lessen traffic congestion, pollution, and bring prosperity. Supply demand and policy framework drive the trade process. The trade process needs the support of trends that involve Demographics, Economics and Governance. This chapter gives an overall view of ports as a global industry and shows some insights of the Indian Port Industry and the Maritime Trade of India. In a time of economic globalization ports are advancing quickly from being customary land/ocean interfaces to suppliers of complete coordination systems. This implies ports have needed to confront numerous difficulties because of eccentric natural changes and patterns in the transportation, port and coordination businesses.

To adapt to the difficulties and rising issues ports over the world have been attempting to build up their physical frameworks, particularly container terminals and related facilities, and to grow their port hinterland through presenting facilitated free trade zones with a desire for creating center ports and global coordination focuses. Marine help administrations provide a wide range of services, ranging from cargo handling and vessel navigation to ship repair and maintenance. China, the US, Japan, Singapore, and South Korea have the most noteworthy number of huge

vessel calls for marine help administrations in the world.

The first subgroup develops, operates and funds infrastructure. Generally the State, national or local, owns and develops this foundation to a port in a port authority or equivalent. Infrastructure is typically defined as the land and the permanent assets that configure the site as a working port, for example quay walls, breakwaters and dredged channels. The second subgroup owns and maintains the superstructure. As a rule, this includes equipment such as cranes and civil engineering services such as electrical supply and paving. The public and private players in this group are wide and varied, depending on the type of cargo concerned and the national legislative environment.

The container market is dominated by the private sector, which is mostly represented by international shipping corporations that control or lease container terminals. In turn, the superstructure is owned and maintained by the private sector. In some ports, the port authority finances, operates and maintains the superstructure in the form of multi-user container terminals. Similar arrangements apply in other cargo modes, although private players are more likely to be cargo owners rather than ship owners in bulk trades.

By far the largest subgroup in the port sector is that of service providers. Cargo-handling services, such as stevedoring, cranes and other handling methods, and cargo processing through the customs institutions, are common to all ports. In this sector, players can include the State as an operator, customs authority and regulator across economic, security, navigation and environmental dimensions. Other players are international shipping groups, local stevedoring companies, cargo agents, freight forwarders and labour unions associated in the main with dock labour.

2.2 OUTLINE OF THE OPERATION OF CHENNAI PORT AUTHORITY

2.2.1 CHENNAI PORT AUTHORITY

2.2.1.1 THE PORT AND SITE CONDITIONS

Fig: 2.1



Chennai Port at Present

Among India's twelve major ports, Chennai Port is the third oldest, at around 135 years old. It is emerging as a hub port on India's East Coast, with the strategic advantage of having the entire South India as its hinterland. On the south-east coast of India, near the north-east corner of Tamil Nadu, Chennai Port is located at latitude 13°06' N and longitude 80°18' E. The port is situated on a flat eastern coastal plain. The port's strategic location allows it to handle a wide range of cargo, including containers, liquids, and break bulk freight.

Ambedkar Dock, Jawahar Dock, and Bharathi Dock are the three dock systems of the port. It features a total of 24 berths and a 5.5-kilometer quay length. Some of these docks have a

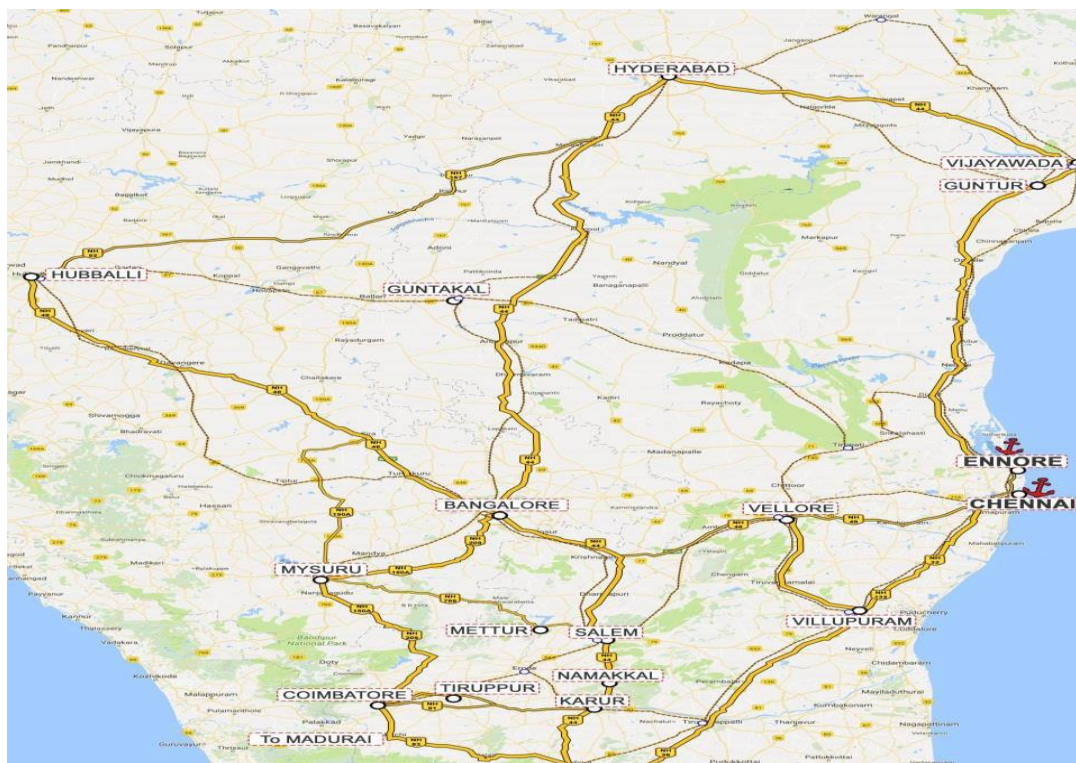
maximum draught of 17.4 meters. The port is accessible through a 7.0-kilometer waterway with water depths of 19.2 meters in the outer channel and 18.6 meters in the inner channel. The Port covers around 240 ha of land and 170 ha of water spread.

2.2.1.1 RAIL AND ROAD – INTERNAL NETWORK AND EXTERNAL CONNECTIVITY -HINTERLAND CONNECTIVITY

General

To enable faster cargo receipt and evacuation, a port's internal road and rail network, as well as external connectivity to national highways and trunk train routes, are critical. As a result, the current condition at Chennai Port, as well as their ideas, are outlined in the sub sections below.

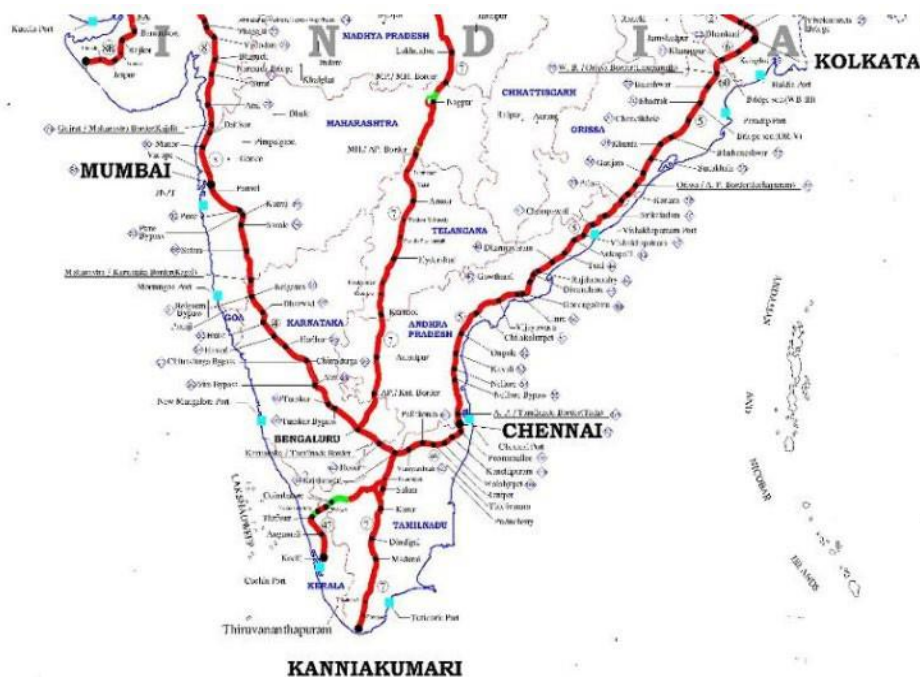
Fig 2.2



Road Connectivity

Chennai is well connected to other major cities via national highways and is renowned as the "Gateway to South India." NH 5 connects it to Kolkata, NH 4 connects it to Mumbai, and NH 45 connects it to Kanyakumari.

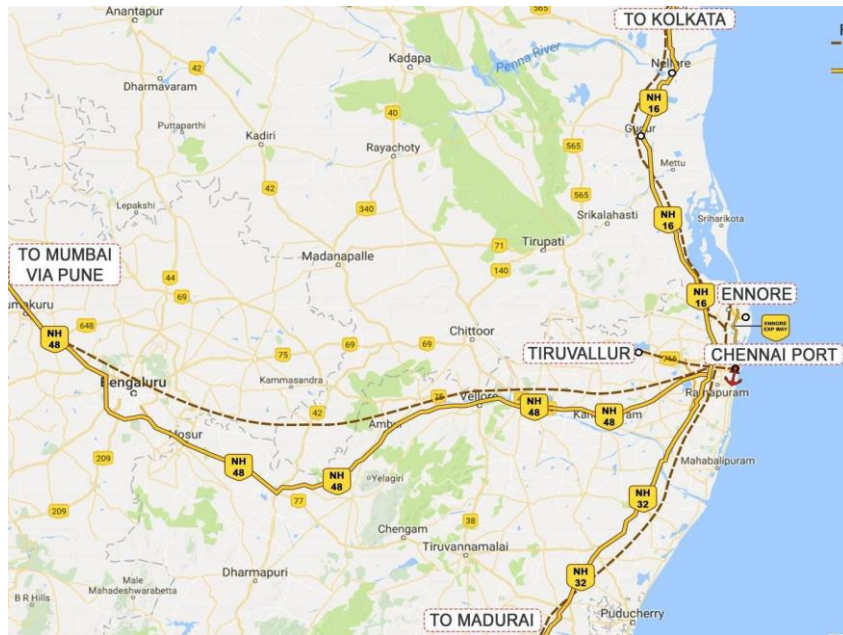
Fig 2.3: Road Connectivity to other states



Rail Connectivity

The national railway network is well connected to Chennai Port. The Port is connected to the Southern Railway network via two stations: Chennai Beach Railway Station, which connects the Port to the southern parts of Tamil Nadu, and Royapuram Station, which connects the Southern Railway Trunk line to Kolkata, New Delhi, Bangalore, Coimbatore, and other destinations. The Port also has a 70-kilometer internal rail network.

Fig 2.4



2.2.1.3 PORT INTERNAL CONNECTIVITY INTERNAL ROAD NETWORK

The Port has ten entry and exit gates in total. The first and tenth gates are properly connected. Gates 2, 3, 5, and 7 lead to small arterial roads, while Gate 8 is inactive. The railway gates No. 4, 6, and 9 link to the Southern Railway lines.

Fig: 2.5



Internal rail network

Two rail entry/exit arrangements connect the Indian Railway network to Chennai Port: one connects Chennai Beach Station to the Port Marshalling yard at the southern end through Gate no. 9; and the other connects Royapuram Station to Bharathi Dock at the northern end by Gate no. 4. The Bharathi Dock linkage was primarily used to transport iron ore to the BD II berth. The iron ore movement has ceased as of today, and Gate No. 4 remains locked.



EXISTING FACILITIES IN CHENNAI PORT

TOTAL QUAY LENGTH	CHANNEL LENGTH	TOTAL LAND AREA	CHANNEL DEPTH
5.5 KM	7 KM	Water – 170 Ha Land – 240 Ha	Inner channel -18.6m Outer channel – 19.2m

Table: 2.1

WIDTH OF THE CHANNEL	OUTER HARBOUR
The width of channel gradually increases from 244 m to 410 m at the bent portion, then maintains a constant width of 305 m	Eastern breakwater – 590 m Northern breakwater – 460 m Outer arm – 1000 m Upper pitch revetment – 950 m

Table: 2.2

Cargo handling equipment at the port

EQUIPMENT	NUMBERS	CAPACITY
Floating Crane	1	150T
Diesel electric locomotive	10	700 HP – 8 No's 1400 HP – 2 No's
Harbour mobile crane	2	100T

Table: 2.3

Cargo storage facilities available in the port

TRANSIT SHED / OVER FLOW SHED	7 no's – 30,693 m ²
WAREHOUSE	5 no's – 30,138 m ²
CONTAINER FREIGHT STATION	3 no's – 40,644 m ²
OPEN SPACE	3,84,611 m ²
CONTAINER PARKING YARD	2,50,600 m ²

Table: 2.4

- Chennai Port has 3 Docks - **Bharathi Dock, Ambedkar Dock and Jawahar Dock**
- Bharathi Dock is home to the existing Container Terminal. Bharathi Dock has seven berths, Ambedkar Dock has eleven, and Jawahar Dock has six, for a total of 24 berths.
- Crude oil and petroleum products, containers, automobiles, edible oil finished fertilizers, fertilizer raw materials, and miscellaneous cargo are among the primary goods handled by the port.



Fig: 2.7

2.2.1.4 CHENNAI CONTAINER TERMINAL PVT LTD. (CCTPL)

Chennai Port was the first port in the world to start processing containers in 1983. The container terminal was given to Chennai Container Terminal Private Limited (CCTPL), a Special Purpose Vehicle formed by a consortium of M/s P&O Australia Ports Pty. Limited and three others, in 2001 for development, operation, and management on a Build, Operate, and Transfer (BOT) basis for a period of 30 years. P&O Steamship Navigation Company, UK was acquired by DP World, one of the world's leading container terminal operators, in 2006, for a 75 percent interest. In 2008, DP World purchased the remaining consortium members' stakes in CCTPL, effectively controlling 100% of the company.

The Container Terminal has a quay length of 885 meters, with four berths CTB 1 to 4. It can accommodate container ships with a capacity of up to 6,400 TEU. The overall yard area is 21.4 acres, with 3,842 ground slots and a storage capacity of 19,710 TEUs. There are 240 reefer plugs on it. A Container Freight Station of 6,500 m² is also located in the yard. Seven Quay cranes and 24 RTGs serve the terminal. It has a capacity of 1.6 MTEU per year.



Fig: 2.8

2.2.1.6 CHENNAI INTERNATIONAL CONTAINER TERMINAL PVT. LTD. (CITPL)

The second container terminal was awarded to Chennai International Container Terminal Private Limited (CITPL), a Special Purpose Vehicle formed by a consortium of M/s Singapore Port Authority and SICAL Logistics Pvt Limited in 2007 for the development, operation, and management of the container terminal on a Build, Operate, and Transfer (BOT) basis for a period of 30 years. It was created in 2009.

The Container Terminal has a total quay length of 832 meters, with three berths SCB 1 to 3. The entire yard area is 35.8 ha, with 7.8 ha of it being reclaimed. It has a total capacity of 27,120 TEUs with 5,424 ground slots. There are 120 reefer plugs on it. Ten Quay cranes and 20 RTGs serve the terminal. It has a capacity of 1.5 MTEU per year..



Fig: 2.9

2.3 OUTLINE OF THE OPERATION OF JNP AUTHORITY

The Jawaharlal Nehru Port Authority (JNPA) in Navi Mumbai (previously known as Nhava-Sheva Port) is located within the Mumbai harbour on India's west coast and was commissioned for the 11th time on May 26, 1989. It is the country's second-youngest and most technologically advanced significant port. It was originally intended to serve as a "satellite port" to the Mumbai Port, with the goal of alleviating traffic congestion at the latter. However, it was subsequently constructed as a standalone port, and it became the country's largest container port. The JNPA has 2,987 hectares of land, which is perfect for creating additional facilities to meet the country's future nautical needs.

The cargo handling facility at JNPA is one of the most advanced in the world. JNPA has been a leader in using information technology (IT) to operate its day-to-day operations, including EDI and a vessel traffic control system (VTMS).



Fig: 2.10

JN Port has already established itself as a key trade and commerce catalyst in the country. JNPT has also been awarded ISO certifications in the areas of EMS 14001, ISMS 27001, OHSMS 18001, and QMS 9001.

2.3.1 INITIATIVES BY JNPT:

Earlier importers with a minimum annual volume of over 300 TEUs registered under the ACP (Accredited Clients Program) scheme of Customs were permitted by the JNPA to clear imports under DPD. The Port took a game changer initiative of eliminating the minimum volume

criteria for eligibility to avail DPD.

Some of the teething troubles faced after launch of the DPD initiative in Feb 2017 which deaccelerated the progress of DPD are as follows:

- a) PPP terminals were insisting on a high deposit to the tune of Rs.10 Lakh from the importers to grant DPD clearances.
- b) The charges of the PPP terminals for DPD clearances were also high as they charged for every shifting carried out in order to deliver the specific DPD container.
- c) The customers had to run from one agency to other in order to register for DPD.

JNPA impressed upon the PPP terminals to discontinue the demand of high deposit for granting DPD. JNPA and terminals have introduced moderate rates (Charge for one shifting only even though multiple shifting is involved to give one delivery) for deliveries under DPD. The procedure to get registration at the terminals has been made online and simplified.

In order to ensure economic and safe transportation of DPD containers and also to simultaneously ensure yard productivity, the JNPA is initiating a transport solution by May 2018 by which high quality transport at pre-determined rates is made available to DPD clients. Such initiatives will increase the percentage and ensure the achievement the target set by the government. As on 1/4/2018, 1,591 importers are permitted by Customs of which, 1,346 importers have already registered with JNPA for availing DPD. JNPA has simplified the registration process. With sustained efforts JNPA has successfully managed to increase in the clearances under DPD from 3% in March 2016 to 39.15% in March-2018.

Direct Port Entry (DPE)

Back Ground: This is an initiative to reduce cost and time in Export Supply Chain. Export containers originate either from CFS or individual Factory. Export containers originating from CFSs are stuffed at CFSs and proceed to terminal after taking approval (Let Export Order) from the Customs formation at CFS.

Factory Stuffed containers coming from hinterland are routed through the (buffer area of) CFS for getting the approval of Customs. The routing of factory stuffed containers through CFS resulted in additional cost of about Rs.3000/- and time of one to two days. In order to reduce such time and cost in the export supply chain, it was decided that a pre-Terminal Gate facility

can be created where the factory stuffed containers can get LEO within a short time.

Earlier each of the three terminals had been provided with 6 Ha of area for use as holding yard by JNPA. The purpose was to provide pre-Gate parking facility to avoid congestion in the last stretch of the road before the Terminal Gate. It was decided that these holding yards can be converted into Customs Processing Zone. The Terminals created infrastructure for commencing the Customs offices in their holding yards. w.e.f. 5.12.2016, the Customs commenced their processing offices in the holding yards.

The factory stuffed containers, which earlier went to the CFS for obtaining Let Export Order (LEO) from Customs, are now coming directly to the holding yards. At the yard they are given LEO by Customs and PIN by the terminals. The trailers proceeding from holding yard are fully documented to make direct port entry. The movement from holding yard to Terminal gates is effectively a Green Channel. This facility avoids congestion in the access roads and facilitates fast entry of containers in to the terminals. After commencement of Custom Processing Zone at holding yards, the DPE has increased to 78%. Exporters save approximately CFS expenditure of Rs. 3,000/- on each TEU and Customs formalities are completed under 3 hours' time on an average.

Advantages:

Both the above initiatives (DPD & DPE) have been implemented by streamlining the existing infrastructure, which has resulted in significant saving of cost and time for imports and exports. The carbon footprint has significantly reduced as Port roads are completely decongested. After the commencement of Customs processing in the holding yards, the Customs office at the Gates have also been re-located to the holding yards. This has ensured faster Gate entry of the terminals. DPE has significantly reduced the road movement to the access roads to the CFSs.

Inter Terminal Transfer of Tractor Trailers

Background: Tractor Trailer (TT) inter-terminal transportation was established at JNPA in February 2015. Truckers used to come into one terminal to drop off export containers, then depart the Terminal Gate and join the queue for the next terminal (to pick up and evacuate an import container). Hence, the trucks used to cover an additional distance of 7.5

K.M. and used to wait outside other Port terminal Gate, leading to congestion at the port roads. The internal lateral terminal movement of TTs was never implemented due to the fact that all the terminals were designed as standalone terminals which prevented sideways movement of

trucks.

Inter Terminal Transfer: By creating the facility to comply with gate-out and gate-in procedure inside the terminal itself a lateral movement between terminals is facilitated. Now, a truck carrying export containers enters GTI/NSICT/JNPCT, drops them there, makes a sideways movement to the other terminal, picks up import cargo and moves out of the gate. This initiative was started on 13th Feb 2015 from JNPCT to GTI and from 24th Feb from GTI to JNPCT. After success of this, ITT transfers between JNPCT-NSICT and vice versa from 24th March onwards was also started.

Advantages: This initiative has been showing very positive results and has resulted in saving at least 7.5 Km road movement per trip by completing two commercial transactions in one trip. This initiative has benefitted customers in reduction of fuel costs and reduction of more than 7% of transactions at the terminal gates coupled with more than 12% reduction in number of trucks (due to reduction in transaction, other TTs had better utilization) due to optimal utilization of the Tractor Trailers (TTs). This initiative has been one of the key endeavors for ease in transaction by the Trade with the Terminals by faster turnaround time and reduced fuel consumption, with the added advantage of controlled pollution.

The World Bank has mentioned the usefulness of the ITT in the 2018 Report on Trading across Borders.

Till March 2018, 5,42,325 trucks have used this facility completing 6,72,029 transactions, leading to fuel saving of over Rs.8.13 crores and overall saving of Rs.162 crores for the Trade. This is a significant environmental friendly initiative.

2.3.2 PORT/ TERMINAL OVERVIEW

Earlier when port was commissioned Bulk Terminal was in existence considering the demand of bulk cargo (fertilizers, food grains, etc.). Since demand of import of above commodities has been reduced and subsequent increase in containerized cargo. JNPA management decided to convert this Bulk Terminal into Container Terminal which has been now converted into Container Terminal and given on BOT basis to Gateway Terminal of India Private Limited. This way JN Port has become complex of four container terminals which are JNPCT, NSICT-DP World, NSIGT, GTI-APM and BPCL.

Jawaharlal Nehru Port Container Terminal (JNPCT)



Fig: 2.11

JNPCT has its own container port with cutting-edge facilities that satisfy all international requirements, a welcoming ambiance, low operating costs, and great rail and road access to the hinterland. JNPCT is a unique container terminal of JN Port because of its backup infrastructure, which includes 34 CFSs, connectivity with 46 ICDs, full customs house, airport, hotels, and closeness to Mumbai, Pune, Nasik city, and its industrial belt.

During the fiscal year 2016-17, the Port handled 4.50 million TEUs of container traffic, an increase of 0.19 percent over the previous year and the greatest level of container traffic since the Port's founding. The JNPCT contributed 1.53 million TEUs to the overall traffic of 4.50 million TEUs (34.09 percent).

TERMINAL	JNPCT
Quay Length (Mtrs.)	680
draft (Mtrs.)	14 (Tidal)
Capacity (In million TEUs)	1.35
Reefer Plugs (Nos.)	576
RMQCs (Nos.)	9
RTGCs (Nos.)	18
RMGCs (Nos.)	5
Tractor Trailers	100
Backup Area –In Hectares (Container Yard)	61.49 (Including Shallow Birth area)

Reach Stackers	11 Nos.
Railway Siding Tracks for ICD	4
Maximum Permissible LOA of The Vessel	370 Mtrs

Table: 2.5

Shallow Draught Berth

It is commissioned on 1st September 2002 of Total Length 445 meters. Vessels up to 183 meters LOA and up to 10 meters draught are being handled. Container Vessels, Cement, General Cargo and Liquid Cargo Vessels are being handled with a Capacity of about 0.15 Million TEUs Container & 0.9 Million Tonnes Other Cargo. Total 2.77 Million Tonnes.

Fig: 2.12



TERMINAL	SHALLOW DROUGHT TERMINAL
Quay Length (Mtrs.)	445
Maximum draft (Mtrs.)	10-Max (Tidal)
Design capacity (Million TEUs Year) (Million Tonnes/Year)	0.15 2.77
Max. Permissible LOA of The Vessel	183 Mtrs
RMQCs (Nos.)	3

Table: 2.6

Nhava Sheva International Container Terminal (NSICT-DP World)



Fig: 2.13

JN Port entered into a license agreement in July 1997 with M/s. Nhava Sheva International Container Terminal (NSICT) a consortium led by M/s. P & O Ports, Australia, for construction, operation and management of a new 2-berth container terminal on BOT basis for period of 30 years.

This Terminal which operates with state-of-the art infrastructure and provides world-

class service is certified for ISO 9001, ISO 14001, OHSAS 18001 and ISO 27001 management systems .In December 2008, DP World Nhava-Sheva became the first ISO 28000 security certified marine terminal in India, and again proved itself to be a truly world class container terminal setting the standard for all other terminals in India to follow.

DP world Nhava-Sheva is Indians first privately managed container terminal. Developed at a total cost of US \$250 million, the terminal was set up 15 months ahead of schedule span of time for the project of its size. Currently it is managed under a build operate transfer agreement set up with the Jawaharlal Nehru Port Authority (JNPA) of the government of India.

The Present Capacity of the Terminal Is currently assessed as 15.00 million tonnes per year.

TERMINALS	NSICT
Quay Length (Mtrs.)	600
Maximum draft (Mtrs.)	14 (Tidal)
Design capacity (Million TEUs Year)	1.2
(Million Tonnes/Year)	15
Reefer Points (Nos.)	772
RMQCs (Nos.)/ Loading Arms	8
RTGCs (Nos.)	29
RMGCs (Nos.)	3
Reach Stackers (Nos.)	3
Tractor Trailers (Nos.)	110
Yard Area (In Hectares)	25.84
Max. Permissible LOA of The Vessel	370 Mtrs
Railway Siding Tracks for ICD	2

Table: 2.7

CHAPTER 3

PRESENT STATUS OF DIRECT PORT DELIVERY AT THE SELECTED PORTS

3.1 STUDY ABOUT EXISTING CUSTOM CLEARANCE PROCESS FLOWS

3.1.1 Review of Custom Clearance Terminology & Process Flows

Bill of Entry - A declaration of goods entered at a Custom House, of imports, detailing the merchant. Quantity of goods, their type, and place of origin or destination.

Customs Duty - A customs duty is a tariff or tax on the importation or exportation of goods.

Imported products - Imported products are goods brought into India from another country.

The major stakeholders

- Customs Officials
- Importer
- Custom Broker
- Container Freight Station
- Ports/terminals
- Shipping Line
- Partner Government Agencies

Meeting with customs officials to seek practical insights on the process.

Develop the process flow on the following:

- Shipments through CFS.
- Shipments through DPD.

3.1.1.1 CONTAINER FREIGHT STATION (CFS)

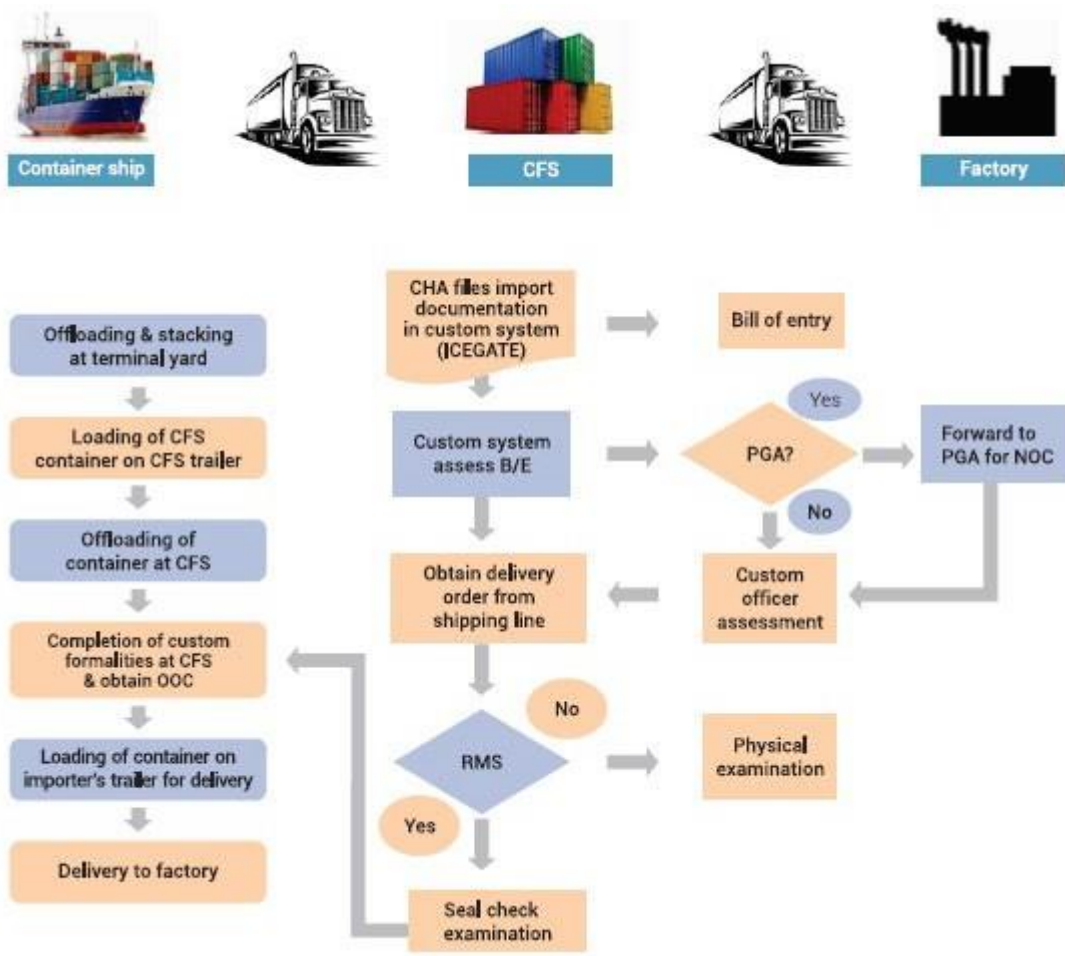
Process

Timeline for Container Freight Station (CFS) Process Flow

Port → CFS → Importer Warehouse/Factory



Process Flow Diagram Port CFS Importer Warehouse/Factory



Key elements of Container freight station (CFS) Process

FlowPort → CFS → Importer Warehouse/Factory

1. As per existing process flow, import containers were transported from port to Container Freight Stations (CFS).
2. The customs clearance process is initiated at customs and post completion of the process at the CFS, container is released and importer takes delivery from CFS to their warehouse/factory.
3. The average dwell time to clear a shipment is around 9-10 days. As the container is stored in the CFS, the importer has to bear Container Detention and CFS storage charges also known as ground rent charges.
4. Experiencing significant increase in import shipments, JNPT engaged multiple container freight stations over a period of time. This was primarily done to facilitate faster movement of container from the Port/Terminal to the CFS and ensure faster turnaround time for vessel berthing at JNPT
5. Despite system automation and RMS facility the customs clearance time under CFS operational model was around 9-10 days.
6. The existing process flow is complex and time-consuming as it involves multiple stakeholders like Shipping Line, CFS & Custom Officials to provide necessary permission to effect Custom Clearance.

3.1.1.2 DIRECT PORT DELIVERY (DPD) PROCESS

Timeline For DPD Process Flow Port → Importer warehouse/factory



DPD Process Flow Diagram Port importer warehouse/factory

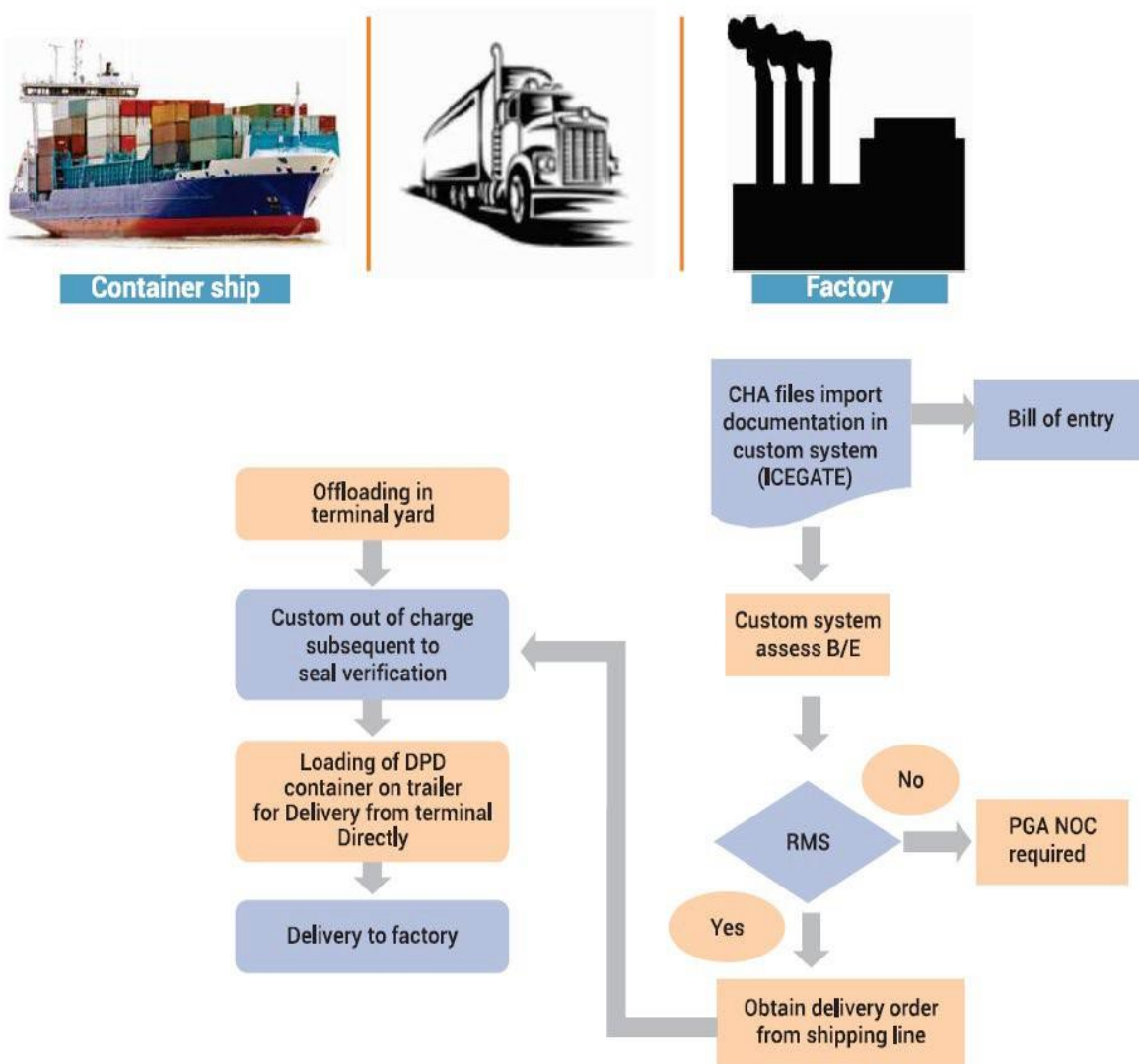
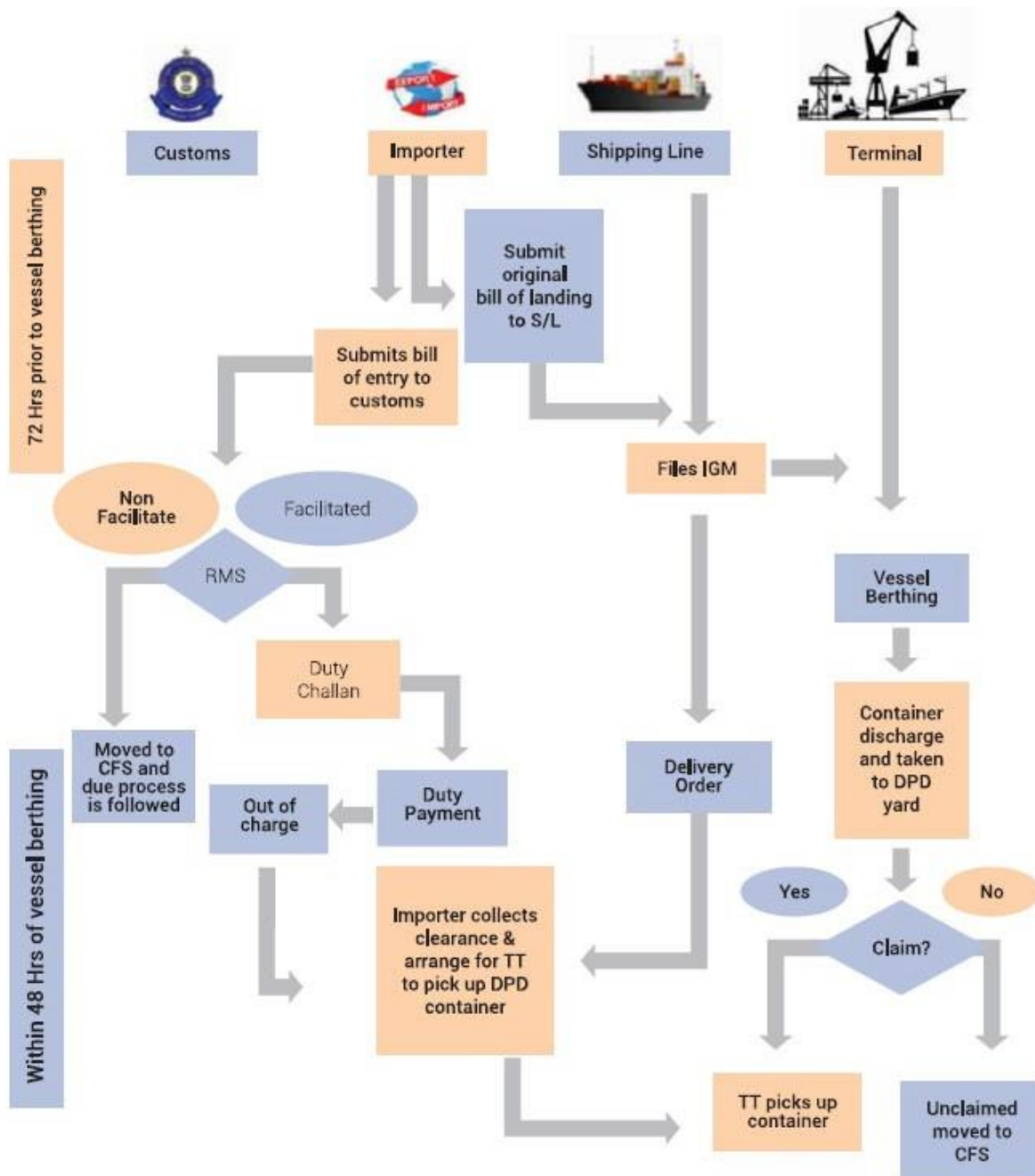


Chart below highlights detail process steps in DPD operations



Key Elements

Direct port delivery is a major JNCH customs initiative wherein importers can take delivery of their shipments directly from port to warehouse/factory thus resulting in significant financial savings towards transportation cost and CFS storage charges. Current DPD facility has been extended to about 750 importers and the importers have already starting to gain through process efficiencies thereby accruing savings for their organizations

As time progresses the infrastructure and transportation are being upgraded to accommodate more DPD importers.

As per norms, Containers designated for DPD have to be picked up by importers within 48 hours of its berthing, else the shipment will be moved to JNPA-CFS.

3.1.2 IDENTIFICATION OF IMPROVEMENT AREAS

SL. No.	Problem Statement	Improvement Areas/Suggestion
1	S/Line work Monday to Friday - 9.00 AM to 5.00 PM. In the event of Out of Charge being received late in the evening - say 6.00 PM, time limit of 48 Hours for taking Direct Port Delivery (DPD) is lapsed, the S/Line system automatically nominates the Container for CY Delivery. Hence Importer is unable to take Direct Port Delivery (DPD)	1) Increase in Shipping Line Working Hours 2) At least 1st, 3rd, & 5th Saturday to be made working Days 3) Electronic Delivery Orders (E-DOs) to be issued
2	Full description of Import Cargo not being captured in the Import General Manifest being filed by S/Lines - E.g.: Say Bill of Lading (BL) / Sea Way Bill of Lading (SWBL) mentions Description of Goods as "Polyacetal Resin Delrin DEL PEC B32 BK033" - the IGM just states "DEL PECB32 BK 033". This leads to issues especially upon scanning - when the actual product is ascertained thus leading to detaining of Cargo and amendment of Description of Goods thus leading to delays in clearance	Complete Description of Cargo needs to be captured in Import General Manifest
3	DPD Facilitation Cell at Customs operational from Monday to Friday - 10.00 AM to 6.00 PM	DPD Cell to be made operational 24/7 so as to reduce dwell time to avail complete benefit of DPD
4	Currently Customs requires hard copies of documents to be submitted to the Out of Charge Officer at CY /DPD Cell/Port	1) GATT Declaration & Importer declaration to be integrated with Customs System

		2) Provision to be made for scanning & uploading copies of Import documents at the time of filing Bill of Entry to eliminate the need for physical submission of documents for Out of Charge, except for Final Print of B/E.
5	Identification of Container No. in the Token System prevailing at GTI Terminal - Currently when trailers enter GTI Terminal, the Trailers are given an Entry Tag/Token upon making entry into the Terminal. Thus, Containers are loaded on FIFO basis - that is whichever trailer enters first, Container gets loaded on to this trailer. This result in Container meant for one location getting loaded on to Trailer meant for another location. Importer has to incur additional cost for Container interchange on the correct Trailer.	1) Token/ Entry Tag should specify the Container Number meant for that Trailer 2) Parking Plazas to be created close by to the Terminal with adequate infrastructure providing for Cranes, heavy duty forklift to facilitate such interchange in case of need.

Table 3.1: Opportunities for improvement

3.2 PRESENT STATUS OF DPD

1. **Number of DPD/E clients:** Traders who had previously registered for the ACP programme were automatically enrolled in the new AEO programme. In 2016, JNCH published a list of 778 potential non-AEO DPD/E importers and exporters to use the service. The DPD facility is now used by roughly 800 AEO approved importers in Chennai Port. This privilege was provided to merchants depending on the amount of transactions and Customs' appraisal of the trader's capacity to fulfil specified commitments. 561 people on the list have registered with Customs to use the DPD service. The list of operators has also undergone changes depending on specific criteria. Traders dealing in goods that requires PGA testing and junk importers, for example, could not be included in the system. Due to the enormous volume of imports and exports handled by the main car firms in Chennai, the provision of non-AEO DPD/E is exclusively granted to them. Former ACP clients make up the remaining DPD operators.
2. **Number of DPD containers:** Until December 2016, the share of DPD containers (as calculated from data provided by the terminal) in relation to the total number of import containers at the Jawaharlal Nehru Port (JNP) was in the 4-6 percent range, which was significantly lower than the PMO's target of 40% by the end of 2016. DPD accounts for roughly 13-16% of overall imports in Chennai, with the automotive industry accounting for the majority of this. However, after 2-3 years of DPD's adoption, the rate of containers cleared through DPD increased dramatically, to the point that DPD now accounts for more than 40% of overall throughput. The percentage of containers approved through DPD increased dramatically between 2017 and 2018, according to JNPA and Chennai Port.

3. **Free time for DPD container evacuation:** At JNP, Customs has set a time restriction of 48 hours from the time of berthing or entrance inward for DPD container evacuation from the port. The free time at Chennai Port is 72 hours. Within this time frame, the importer must fulfil all procedures - receive a delivery order from the shipping line, pay duty, obtain an out of charge from customs, and arrange for RFID/PIN transportation. The container is relocated to approved container freight terminals if an importer is unable to evacuate the containers within the free time. Out of the total DPD containers handled at JNP in December 2016, 528 were routed to Speedy Multimode CFS due to port non-clearance within 48 hours.
4. **Customs designated CFS' for clearance of DPD containers from terminal:** A DPD container is moved to a designated CFS for further clearance if it is not evacuated within 48 hours after vessel berthing at JNP. Speedy Multimode Ltd. was the sole CFS authorized for the aforementioned transfer of DPD containers from the port after 48 hours of arrival, according to Public Notice 66/2008, dated 11.09.2008. (in the case of ACP clients at that time). Permission to handle DPD containers has been expanded to 21 CFS', according to Facility Notice S/5 Gen 43/2015, dated 14.02.2017. There is no officially designated CFS for DPD container evacuation after the free time at the Chennai Port. For DPD containers, an assembly station is being built in Thiruvottriyur, Chennai, which is 6 kilometers from the port.
5. **Charges:** The terminal now supplies an importer with a requisition slip in the form of a Special Service Request (SSR) for handling DPD/E containers. The costs might range from INR 500 to INR 15,000 in India. Furthermore, private terminals at JNP charge shifting fees for DPD containers moving from yard to yard or yard to truck. According to the JNCH, only two shifting charges are permitted. At the JNP, various terminals have varying shifting costs. The Chennai Port Trust and the Haldia Dock Complex do not impose this fee.

Parameter	CFS Mode of Delivery	Direct Port Delivery
Transportation Cost	Terminal-CFS, CFS-Importer	Terminal-Importer
Handling Cost	At terminal and CFS	Only at terminal
Dwell Time	3 days at terminal (maximum) 5-7 days at CFS	2 days at the terminal (JNP) 3 days at the terminal (Chennai)
Free Period (Days)	3 (terminal) + 10 (CFS)	2 (terminal)
Storage	Space available at CFS	Limited space in terminal for stacking
Equipment Availability	Available	Terminal needs additional equipment
Container Evacuation	CFS owned trucks with RFID	Importers' own trucks with a need for RFID/PIN

Table 3.2: Mode of delivery - CFS vs. DPD

After a study of both the systems, the trade benefits acquired through introduction of DPD are:

1. Reduction in the final transit time of import consignments by 6-8 days
2. Reduction in logistics costs by 15,000 to 20,000 per container
3. Reduction in inventory storage costs
4. Reduction/ saving on container detention charges applied by the shipping lines
5. Availability of 24*7 import consignment clearance facility

In addition to the above benefits, the DPD system could also help improve the container turnaround time for the shipping lines.

3.3 DPD IN CHENNAI PORT

Chennai port has adopted the DPD facility for the sole purpose of reducing the congestion what is happening inside the port. Being a port that is laying very close to the city, Chennai port is facing the issue of lack of land for further expansion of the port. In this case, the only way to reduce the congestion that is happening inside the port due to container traffic can be clarified by introducing fast delivery techniques, which would clear off the containers as fast as possible through rail or road. The nearby ports are also showing extreme competition to Chennai ports in terms of the containers handles. Chennai Port is losing a huge amount of business due to the major ports and the private ports that have developed in the neighborhood. Most of the business that Chennai Port used to handle have been taken away by the other ports. In this crisis situation, Chennai port had no other option but to bring up new methods to reduce the container traffic inside the port and bring in more business. As apart of this, Chennai port be one of the first ports who implemented the Direct Port Delivery option for the customers.

The container terminals have shown a rapid increase in the DPD clearance after the introduction of DPD in Indian Ports. After JNPT in Mumbai, Chennai comes second in the list of the most containers being cleared through DPD all around India. As per the statistics, JNPT is the port where most of the containers are being cleared through DPD. Chennai being the second carries out at an average of 40% cargo clearance through DPD. Almost half of the total cargo in Chennai are cleared through DPD. Mostly the Automobile importers and given the AEO status for the DPD clearance.

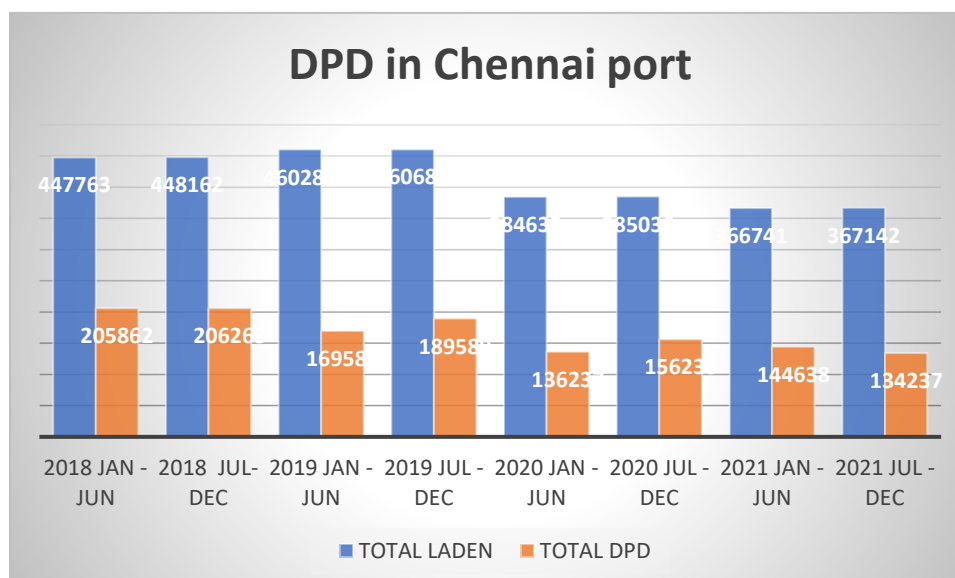
By the end of this fiscal year, the Chennai Customs Zone hopes to clear nearly 80% of container goods through the direct port delivery (DPD) scheme, up from 40% currently. Approximately 46% of containers arriving in Chennai are cleared without having to go through the rigors of a full-fledged inspection. The government has set an 80 percent target for Chennai ports by the end of current fiscal year. According to the Time Release Study (TRS)-March 2018 announced during the ceremony, the updated DPD programme launched by Chennai Custom House in November 2017 has taken off strongly, with DPD container deliveries increasing from 18% in July 2017 to 40% in March 2018. According to the paper, DPD benefits include lower extra transportation costs, less material handling, and timely delivery for production planning. It was the second TRS for 2018, and it focused on identifying bottlenecks, offering in-depth examination of new procedures and technology, finding potential for improving trade facilitation and supporting 'ease of doing business,' and improving transparency and

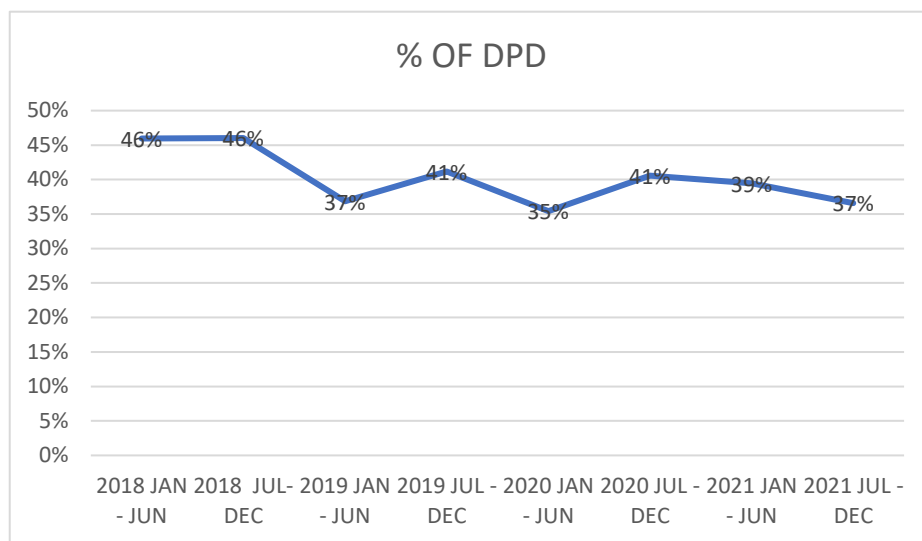
accountability. In the last three months, Chennai Customs has received over 1,000 AEO petitions. In Chennai alone, almost 310 persons have acquired AEO certification.

Direct Port Delivery became fully operational in the port of Chennai in mid-2017, when the number of DPD clients in the port began to rise, and it now has roughly 800 AEO approved customers or importers. The graph below shows the improvement in DPD rate from the year 2018-2019 to the month of March.

PERIOD	TOTAL LADEN	TOTAL DPD	% OF DPD
2018 JAN - JUN	447763	205862	46%
2018 JUL- DEC	448162	206263	46%
2019 JAN - JUN	460285	169589	37%
2019 JUL - DEC	460684	189589	41%
2020 JAN - JUN	384635	136237	35%
2020 JUL - DEC	385036	156238	41%
2021 JAN - JUN	366741	144638	39%
2021 JUL - DEC	367142	134237	37%

Table 3.3: Share of DPD in Chennai Port





3.4 DPD IN JNPA

According to the industry, the first and most important hindrance in the implementation of the model at JNPA port which was designed on the CFS model, is the lack of infrastructure and space. The trade fears that the DPD model will increase congestion in an already congested port, thus reducing efficiency instead of improving it. This model may face similar issues at other port locations as well.

Another problem that the trade, especially the CFS operators will face due to implementation of DPD is the loss of business, which would lead to employment loss for CFS employees. Some of the CFS operators are also fearing redundancy after the DPD model is implemented for majority of the import shipments.

In the one-year since the DPD system was extended to all ACP members and despite teething issues, JNPA port has managed to increase the share of DPD model in import container clearance. According to reports, as of April 2017, 27.62 per cent of total import containers were cleared through DPD.

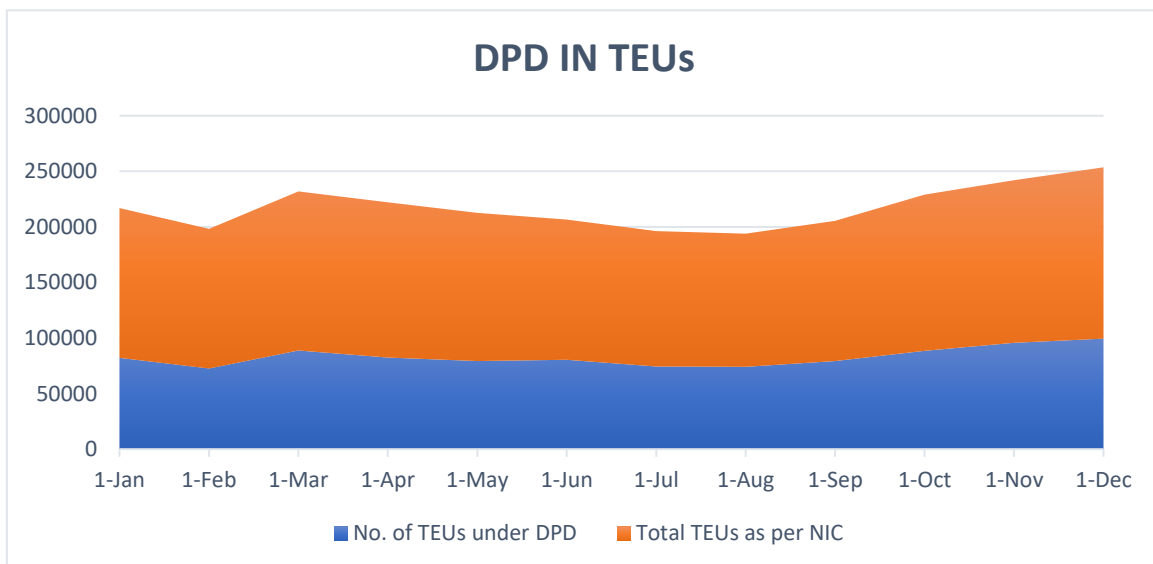
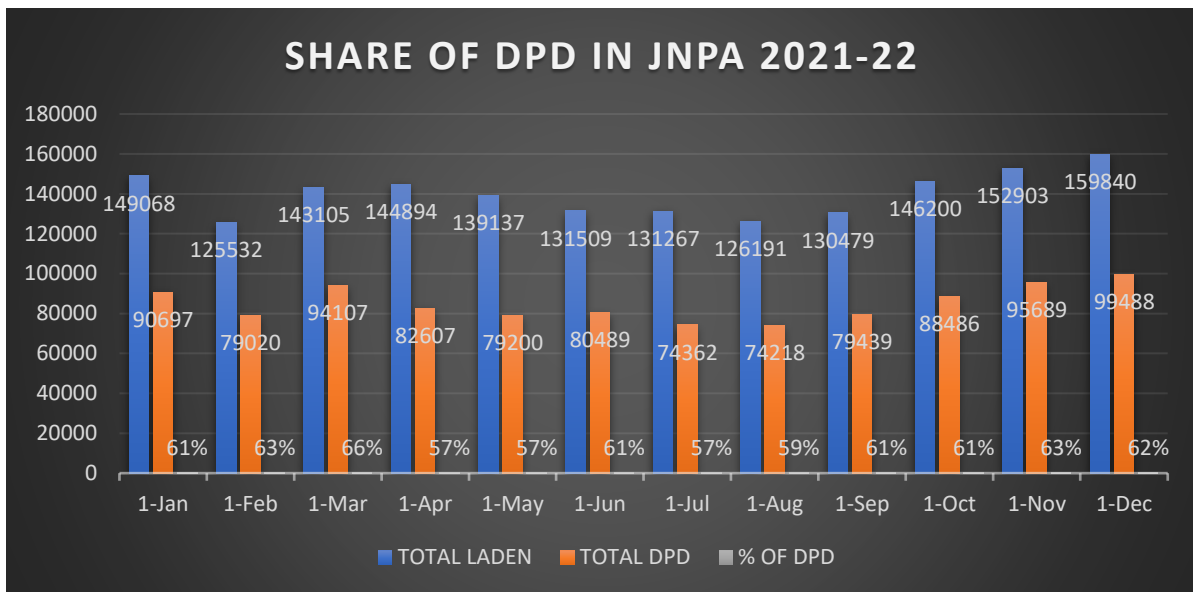
Even though the DPD system has gained in popularity in the last one year, it has also faced some resistance from various sectors of the trade.

The model which was launched to improve efficiency and reduce cost for importers has created other problems like inventory management, storage space crunch, and lack of required number of trailers. For importers facing these issues, especially storage space problems, clearing containers via DPD may increase their overall cost instead of reducing it.

JNPA port authorities are also facing a challenge in setting a uniform pricing for DPD system across the four terminals at JNPA. The private players operating 3 of the four terminals are opposing the application of a uniform rate for direct port delivery as it may not benefit all the terminals equally. In fact, according to reports, for the terminals operating on a revenue- shared model, it may lead to lower revenues.

PERIOD	TOTAL LADEN	TOTAL DPD	% OF DPD
2018 JAN - JUN	874540	331852	38%
2018 JUL - DEC	900562	364340	40%
2019 JAN - JUN	946085	425606	45%
2019 JUL - DEC	892218	399771	45%
2020 JAN - JUN	708026	375426	54%
2020 JUL - DEC	666306	370606	56%
2021 JAN - JUN	844619	485858	58%
2021 JUL - DEC	846880	511682	60%
2022 JAN - APR	564846	359386	64%

Table: 3.4 Share of DPD in JNPT



3.5 OPERATIONAL EFFICIENCY OF DIRECT PORT DELIVERY

The transition to direct port delivery (DPD) at ports like as JNPA has thrown the Rs.4,500-crore container freight stations (CFS) business into "existential crisis." "The rising percentage of DPD, particularly at JNPA, indicates that India's CFS business would face an existential crisis sooner rather than later, beginning with income flatlining this year." The business has risen at a rate of 6-8 percent per year over the previous five years to become a Rs.4,500-crore industry, with 169 CFS and 67 inland container depots (ICDs) in the nation.

The DPD volume, or the number of containers that did not use any CFS, increased by 428 percent at JNPA, which handles over half of all container handling in the country. Outside of the port, a CFS is used for customs clearance and other regulatory procedures, whereas ICDs are located in the hinterland. "The regulatory income of CFSs, which includes handling, storage, and inspection costs, will decrease further with the introduction of DPD into Ports," according to the report. CFS operators are likely to seek additional income streams from associated logistics and transportation services to compensate. According to the letter, more than half of DPD containers are remitted to a CFS for storage and further transit to the hinterland, either due to non-clearance within 48 hours or voluntarily by importers, which provides an income stream for them. While the government pushes for DPD throughout major ports, starting with JNPA, certain consignees may find CFS to be a viable transit and storage option.

Given that non-cleared and damaged Container account for up to 20% of the flow, CFS players can also benefit from the opportunity to manage them. On the other hand, beginning in May 2018, the decision to provide transportation services to importers across five geographical corridors at pre-determined rates is projected to put more pressure on CFS participants.

Because handling and storage leases are their principal business stream, smaller CFS participants in the JNPA cluster are projected to suffer the most.

The Jawaharlal Nehru Port, being India's largest container port by volumes handled issued a trade notice allowing all its Accredited Client Programme, or ACP clients to opt to take delivery of their cargo directly at the port than at a container freight station. ACP clients come under the programme that was introduced by the Customs in 2005 to grant assured facilitation at all the EDI enabled customs stations to importers who are found to be highly compliant to be exempt from the routine examination. These clients also can avail an additional four percent duty waiver because of the scale of their business. Any customer who was importing cargo worth more than 10 crore, paying customs duty of `1 crore and filing at least 300 B/Ls annually would be eligible for the ACP initiative. Then too, the cargo would go to a designated CFS and the client could Delivery from the facility. However out of the total 170 odd registered clients, only 40 to 50 importers signed up for this scheme and far fewer continued to avail this scheme until 2016. This was, therefore, the government's first attempt to implement DPD. The next directive came of course, from the government in 2017 after India's ranking in the ease of doing business index remained at 143, far lower than any of the other developed economies. And to the government's credit, it conducted many a workshop to create awareness and stressed on importers to avail this facility. The JN Port was asked implement this scheme immediately as

over 55 percent of India's container traffic passes through this port. Port officials say 778 importers of over 4,000 agencies have already availed this facility and are currently taking delivery of their goods at the port directly. Private terminals operating at the same port too kick started offering this facility too. The CFS Association, the nodal body for all the freight stations says the DPD system might dent their business with most cargo owners moving out their wares from the port directly. They argue that the freight stations are well equipped to dispatch cargo quickly thus aid in reducing the dwell time. Also, when JNPA was conceptualized, it was designed to function around the container freight station model after the Mumbai Port could no longer handle box cargo for want of space and larger volumes of bulk and break bulk cargo being handled. So, when importers of container cargo moved to JNPA and the ACP programme was introduced, cargo was evacuated far quickly than it was at the Mumbai port. For an ACP client, who needed no inspection and assessment, movement of cargo out of the port was swift as the Customs would provide him an Out of Charge or OOC certificate once he produced the Bill of Lading and cargo is moved to the CFS. This process helped in bringing down the dwell time significantly from 20 days earlier to about 6.8 days currently. Of this too, about 25 per cent of the cargo is cleared in the first two days, about 35 per cent of it in the next five days. So, roughly about 60 percent of the cargo gets cleared in the first one week. The balance cargo might take longer because it could be nominated cargo or could also be in the high sea sales category. Such cargo might continue to remain at the CFS as it would be a cheaper and safer option for the importer to store his wares for a ground fee at the station. Arguing for the importer, the CFS man says the cargo owners should be given an option to clear and claim his cargo at his will. "The importer should be allowed to claim his cargo from the container freight station at his will. Most cargo owners pay the customs after recovering revenue from sales made in small tranches and clear the next batch of cargo paying up the customs duty," said one of the members of the CFS Association. Also, the port has designated Speedy Container Freight Station as the nominated station for all cargo left unclaimed within 48 hours to be taken there. This move has left the CFS and the importers in the lurch as they reckon the choice has to be left to the importer to choose from a large option of CFSs. Moreover, if the customer does not have the option of storing his goods at a CFS, he will have to pay perhaps a similar sum to a yard for storing his goods and transporting them thereon. This may lead additional costs if the goods have to be transported to a long distance yard instead of a CFS close by

CHAPTER 4
SUMMARY AND CONCLUSION

4.1 FINDINGS

- DPD has been a successful initiative introduced by the Government to increase the ease of doing business by making easy the clearance for import and export goods.
- The rate of users availing direct port delivery in the ports is being increased every year due to the reduction in logistics and handling cost which is high in case of the CFS delivery.
- Due to the implementation of DPD the congestion inside the ports especially for the city ports like Chennai has been remarkable reduced.
- CFS's are getting to act as warehouses in case the importer is not having the facility to store the inventory.
- The introduction of DPD has reduced the bulky documentation process for imports.

4.2 SUGGESTIONS

- 1. Intensive DPD/E awareness-raising in the hinterland:** Approximately half of JNP's freight originates from the North Indian hinterland. Similarly, important manufacturing and marketplaces are located in the state's interior at ports like Chennai and Haldia. This involves the appropriate Custom Houses holding workshops and seminars for DPD/E in the hinterland in order to promote the program's time and cost benefits and enroll additional users. It is necessary to consider extensive awareness building through the use of channels such as media, email, and the creation of mobile applications. In order to generate the required favorable reaction to the programme, the progress of the different strategic advances must be continuously tracked and presented to existing and new consumers.
- 2. On the CBEC website, create a centralized DPD/E portal:** There is a need to create a centralized DPD/E portal on the CBEC website in order to resolve any uncertainties in policy and operational elements of direct delivery. Currently, DPD/E has a distinct Standard Operating Procedure (SOP), with each department having its own. Customs House and the terminal each publish their own SOPs and fees. A centralized portal would serve as a single point of contact for answers to common programme questions and clarifications, such as documentary requirements, DPD container free periods, and so on. The site may additionally

provide port-by-port lists of DPD/E compatible clients on a regular basis..

- 3. Potential extension of DPD facility to all RMS facilitated bills of entry:** To boost the number of DPD customers, it has been recommended that the service be expanded to encompass all RMS enabled bills of entry at Indian ports for direct delivery. Each Custom House can gradually publish lists of potential customers for registration, with the ultimate goal of putting all RMS-facilitated cargo under the DPD programme. In order to comply with international norms, an increase in the total number of RMS bills of entry at the port would be required. Such actions would speed up the process of attaining the government's direct delivery share objectives.

- 4. Infrastructure improvements at terminals:** DPD containers are stacked separately from CFS/ICD bound containers in a designated yard at a terminal. Additional equipment, such as an RTGC or reach stackers, is required in these yards. Increased purchasing of such technology will be necessary as the number of DPD containers grows, allowing for more efficient container handling. Additional yard space would also have to be considered in order to ensure that the direct delivery procedure runs well. To attain this long-term goal, TAMP must be integrated into the DPD programme in order to make essential interventions toward the inclusion of key infrastructure modernization elements in the concession agreement.

- 5. Standardization of DPD terminal prices and free periods:** The TAMP or the CBEC shall make a public notice specifying the free duration for DPD containers at the terminal. The local Customs House, ports, shipping lines, and importers must all be updated. Any misunderstanding about a container's free period for direct delivery at the terminal would be eliminated by such a message. The free period should be uniform throughout the country. To realize the entire potential of direct delivery, the necessary notifications aimed at standardizing the charges payable by the importer to the ports, shipping lines, and CFS' must be in place.

- 6. Regulatory standards for shipping lines:** It is important to implement appropriate rules for shipping lines, including requirements for documentation compliance from importers and DPD container costs. The unfavorable view of DPD among merchants, for example, stems mostly from the impossibility of meeting the documented requirements, which include submitting authentic bills of lading to shipping lines prior to IGM filing. In order to make DPD easier, such practices must be discussed and standardized among ports. Establishing a regulatory framework will go a long way toward achieving this, and will thus play a key role in molding end user perceptions of the DPD programme.
- 7. Encouragement of electronic bill of lading submission:** Due to the difficulties faced by traders in obtaining the original bill of lading within the timelines currently stipulated by shipping lines at the JNP, it is proposed that shipping lines accept an electronic copy of the bill of lading from an importer or his nominee for a period of up to 48 hours from the time of vessel berthing in order to reduce container dwell time. This procedure should be followed in all Indian ports.
- 8. Reducing the time it takes to file an advance bill of entry and a shipping bill:** Filing an advance bill of entry and shipping bill is a requirement for DPD/E since it speeds up the RMS facilitation procedure at Customs even before the container arrives at the port of discharge. As a result, any delay in filing a bill of entry or shipping bill in advance must be addressed. Measures suggested include:
- a. Penalizing any delay in order to deter such behavior.
 - b. Establishing efficient Bill of Entry Amendment Facilitation Centers in all ports to simplify and expedite the amendment procedure.
 - c. Amendments to advance bills of entry for DPD containers shall not be penalized.
- Such measures are expected to encourage advance filing of bill of entry among traders, thus potentially leading to an increase in the number of DPD transactions.

- 9. Provision for shipping lines to file a 'Advance Manifest':** The government should consider the notion of a "Advance Manifest," which is based on worldwide best practices. The shipping line files an Advance Manifest 24 hours before the vessel departs the loading port. It is electronically forwarded to Customs and the importer in the United States to begin subsequent steps. Advance manifest has a number of benefits, including security assurance for Customs, prior notification to the importer of container departure (as opposed to a bill of lading, which is issued 24 hours after the vessel departs), reduced chances of errors due to advance notice of container details (particularly in the subsequent bill of entry), and finally, greater chances of avoiding unnecessary bureaucracy in terms of getting amendments completed.
- 10. Development of an information board:** An information board is required for real-time notification of vessel container loading and sail off times. For DPE, constant updated information concerning the cut-off time for loading a container on a vessel must be supplied to the transport operator and the exporter. This will shorten the time it takes an export trailer to arrive at the parking lot, acquire a Let Export Order (LEO), and enter the port.
- 11. Ground rent costs for DPD/E containers should be standardized:** When an export trailer arrives at the port gate after the vessel has departed, it is detained at the CFS until the next vessel arrives, and ground rent is then imposed on the container according to the specified rate. Ground rent is charged in addition to the indicated rate for DPD import containers heading to CFS after the free time has expired. Such procedures must be scrutinized to ensure that the direct distribution programme runs well. As a result, it is proposed that the ground rent for both DPD and DPE containers be standardized.
- 12. Increasing the speed with which DPD/E cells generate at ports:** Each Custom House must have a dedicated DPD administration cell in order to maximize the benefits of the DPD programme to existing and future customers across all ports. The daily activities of this unit would be managed by a nodal officer. The establishment of these cells would aid in resolving operational difficulties on the ground and conducting local capacity-building workshops for users.

4.3 CONCLUSION

The growing share of DPD as a percentage of total containers transported through JNPT is likely to have an immediate negative impact on the traditional CFS business. However, absence of end-to-end solution provider coupled with higher share of customers opting to go for CFS route owing to reduced rent and safety aspects would provide opportunity to CFS gradually. The CFS operators have to re-engineer their business model in order to provide warehousing facility to custom-cleared DPDs and bundled value-added-services such as delivery, packaging, inventory management and transportation in addition to traditional CFS services to recover the loss in business due to DPD.

DPD has already proven that it is much more cost effective and less time consuming as compared to CFS. But still there are requirements of major policy tweaks and infrastructure developments to carry out the DPD business for a large number of importers in the industry. As if now in India the major stakeholders of DPD are the major ports i.e JNPT, Chennai Port etc., it has to be implemented on the minor ports as well which would help faster imports and exports.

Implementation of DPD improves “Ease-of-doing business” by providing efficient and hassle-free logistics service to the importers. The same is operational globally at most major ports. But capability to service a large client base requires improved technology and supporting infrastructure at container terminals and warehouses, which is lagging at the moment in case of major ports in India. It is important to expeditiously develop technology systems for storage and quick movement of containers. This would gradually lead to importers/consignee’s realizing both time and cost benefits of DPD.

BIBLIOGRAPHY

1. Chennai Port Trust (Traffic Department)
2. Jawaharlal Nehru Port Trust
3. www.jawaharcustoms.gov.in
4. www.indianpcs.gov.in
5. www.mnagementparadise.com
6. www.briefindia.com
7. www.scribd.com
8. www.issuu.com/cargoconnectmagazine
9. www.researchgate.net
10. www.lsclogistics.co
11. www.cfsai.in
12. www.economicstimes.com
13. www.maritimegateway.com/direct-port-delivery
14. www.kolkatacustoms.gov.in
15. www.ibef.org/india
16. www.dbschenker.com
17. www.linershipping24.blogspot.com
18. www.slideshare.net
19. www.samsaragroup.com
20. www.jnport.gov.in
21. www.dnaindia.com