

A STUDY ON ROLE OF PORTS, CONTAINER FREIGHT STATIONS AND INLAND CONTAINER DEPOT IN LOGISTICAL DEVELOPMENT

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Abstract : Logistics management is that part of the supply chain management process that plan, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customer's requirements.

With rising consumer demand and the resulting growth in global trade, the role of infrastructure support in terms of rails, roads, ports & warehouses hold the key to the success of the economy.

Ports have been natural sites for transshipment in order to transfer goods from one mode of transport to another. They have historically provided the link between maritime and inland transport, and the interface between the sea and rivers and roads and railways.

At present, ports play an important role in the management and co-ordination of materials and information flows, as the transport is an integral part of the entire supply chain. In a wide sense, ports are complex entities supporting to the procurement of raw materials, the manufacturing and the distribution of finished goods. They are the potential members of different supply chains.

CFS is a place where containers are stuffed, de-stuffed and aggregation/ segregation of export/import cargo take place. With the growing volume of international trade, the need for expeditious clearance of goods at the port within the minimum possible time has been gaining importance. This is more so when the ports are facing congestion at their premises. A CFS is an extended arm of Port/ ICD/ Air cargo Complex, where import/ export goods are kept till completion of their examination and clearance.

The present paper deals with changing logistical infrastructure and role of ports and container freight stations and ICDs in the logistical development of our country. It brings into light the developments taking place at ports and a key role of CFS in developing it.

INTRODUCTION

In present phase of globalisation of trade and business, logistics development is an important area. All major developing and developed countries are focussing to improve its logistics infrastructure to facilitate growing business. Attempts are also being made to bring down the costs/expenditure on logistics. This paper deals with the role of ports and container freight stations in the logistical development. Ports play a major role in the movement of goods. Container freight is an extension to port facilities to avoid congestions on ports and helps to speedy movement of goods from ports to customers. Present paper also deals with the concept of CFS, its functions and its role/importance in foreign trade.

LOGISTICS

Logistics management is that part of the supply chain management process that plan, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customer’s requirements.”(CSCMP.ORG).

LOGISTICS SECTOR OVERVIEW:

Logistics is a unique sector that plays a major role in India’s booming economy. In 2010, the logistics industry was valued at \$125 bn and is expected to grow at this rate for the next 3-5 years. The Indian logistics sector employs around 45 million people, which is far greater than the number of employees in the IT and ITES sector combined (a total of 4.3 million people). This is an indicator of the booming logistics sector and its role in India's growth. The primary goal of a logistics company is to supply goods across the supply chain, from raw materials to finished products for use by consumers and companies alike. Usually, logistics companies use four modes of transport to move freight – road, sea, air and rail. In reality, India continues to portray the image of a backward player in the global logistics arena with barely any multimodal logistics centers. Indeed, despite its strategic location, the country has been unable to evolve into a hub for international freight. Poor infrastructure facilities have brought into focus two crucial areas that require immediate attention in developing India’s logistics chain. They are logistics costs and value-added services. Logistics costs, which include transportation, warehousing, inventory management, packaging and administration-related costs are estimated at 13 to 14% of GDP, which is high compared to other developing nations’ figures of 6 - 8%. Customers in India pay much higher than their counterparts in other countries for freight services. They are also faced with significantly higher delays in freight services, which give the Indian logistics sector a sluggish and unreliable appeal. Very often, customers have to track the progress of their consignment to ensure it reaches its destination on time.

THE CHANGING LOGISTICS INFRASTRUCTURE

With rising consumer demand and the resulting growth in global trade, the role of infrastructure support in terms of rails, roads, ports & warehouses hold the key to the success of the economy.

Goods are transported predominantly by road and rail in India. Whereas road transport is controlled by private players, rail transport is handled by the central government. With the second largest network in the world, road contributes to 65 per cent of the freight transport (Rastogi, 2006). Road is preferred because of its cost effectiveness and flexibility. Rail, on the other hand, is preferred because of containerization facility and ease in transporting ship-containers and wooden crates. Sea is another complementary mode of transport. Ninety five per cent of India’s foreign trade happens through sea (Deccan Herald, 2006). India has 12 major ports, six each on the West and East coasts and 185 minor ports. Table 1 maps the various modes on different performance indicators, clearly indicating the vitality and importance of road transport in Indian economy. There is also evidence of an, across the board, increase in freight traffic for all modes indicating an increased logistics activity. For instance, the per cent change in road, rail, and air and sea cargo traffic has increased, between 2001 and 2005, from 5 to 14 per cent, 4 to 7.5 per cent, 6 to 20 per cent and 3.5 to 11 per cent respectively (CMIE Database, 2006).

Table 1: Comparison Chart for Various modes			
	Rail	Road	Sea
Number (wagons, trucks, ships)	214760	3487538	806
Freight Capacity(mn ton)	10.66	5.12	7.9
Route Length (mn km) /Number of major ports	0.11	3.34	12
Freight Revenue (US \$ bn)	7.00	38.64	4304
Major Products	coal, steel, petroleum, primary metals	automobile, electronic items, garments etc.	iron ore, coal, petroleum (and industrial and consumer products on the outbound export)

Source: IAEIS, 2005-2006, Financial Express, 2006a

THE CHANGING ROLE OF PORTS IN LOGISTICS MANAGEMENT

Ports have been natural sites for transshipment in order to transfer goods from one mode of transport to another. They have historically provided the link between maritime and inland transport, and the interface between the sea and rivers and roads and railways.

At present, ports play an important role in the management and co-ordination of materials and information flows, as the transport is an integral part of the entire supply chain. In a wide sense, ports are complex entities supporting to the procurement of raw materials, the manufacturing and the distribution of finished goods. They are the potential members of different supply chains.

OVERVIEW OF INDIAN PORTS AND KEY TRENDS IN PORT HANDLING

Overview of Indian Ports

India is naturally endowed with a long coastline spanning 7 517 km.

The ports sector in India is divided into “Major Ports” and “Non-Major Ports” (minor) ports which are under the jurisdiction of Central Government and State Governments respectively. The legal framework governing the sector comprises the Indian Ports Act of 1908 and the Major Port Trusts Act of 1963.

Major Ports which under Central jurisdiction are governed by policy and directives of the Ministry of Shipping of the Government of India.

Minor Ports are under the State Governments’ jurisdiction and are governed by policy and directives of respective State Governments’ nodal departments/agencies.

India has 12 major ports (the thirteenth one has been announced to be in Port Blair, Andaman & Nicobar Islands, and Indian Ocean) and around 200 non-major ports (including minor, intermediate and captive ports) are located across nine maritime States. Of the non-major ports, around 66 are partly or fully operational and these are mainly in the States of Gujarat, Andhra Pradesh, Goa, and Maharashtra.

Most of the major ports (except Ennore, which is a corporation owned by the Government of India and Chennai Port Trust) are trusts while the minor ports are corporate entities, generally special purpose vehicles (SPVs).

KEY TRENDS AND OUTLOOK

Past trends in cargo growth – robust except in 2008-09

According to the Report of the Ministry of Shipping, released in December 2010, the capacity of major ports has increased from 574.77 million tonnes as on 31 March, 2009 to 616.73 million tonnes as on 31 March, 2010. During the year 2009-2010, 13 PPP projects were awarded at the major ports envisaging an amount of Rs. 2653.77 billion and a capacity of 65.65 MTPA. In addition, six PPP projects have so far been awarded in the current financial year, since April till December 2010.

The year also saw the trend of non-major ports getting closer to major ports in capacities and cargo handling. The Mundra Port in Gujarat has recently commissioned three berths having a combined 60 million tonnes capacity (or 100 000 tonnes per day) for coal handling. As the country’s shipping tonnage crossed the ten million GT mark, the demand on capacities of ports is likely to increase further with economic growth.

A major development during the year, which will boost coastal shipping, is the implementation of River-Sea Regulation. The Coastal Shipping Policy is under preparation by the Shipping Directorate of the Ministry. The Policy will lay rules on cabotage and first right of refusal and implement various recommendations

Table 2. Projected cargo throughput at major ports

(Million Tonnes)	2011-12	2025-26
Kandla	98.13	204.51
Mumbai	76.13	128.61
JNPT	88.77	305.99
Mormugoa	52.25	78.30
New Mangalore	52.17	84.14
Cochin	24.63	53.49
Tuticorin	30.80	71.80
Chennai	64.17	87.11
Ennore	40.64	136.40
Visakhapatnam	81.70	146.80
Paradip	71.55	125.60
Kolkata	58.47	172.32
739.41	1 595.07	

Source: Co-ordination of Business Plans Major Ports of India Volume 2, 2007.

As per the projections in the Table 2 above, it can be noted that most Eastern and Western ports show high throughputs, due to their vicinity to the large hinterland in the North. The Southern ports have a smaller hinterland, but they are located close to the main international shipping routes, which could be an opportunity for the future. Compared to the National Maritime Development Plan 2006 forecast, CRISIL (2007 forecasts) predicted a port throughput which on average was 18% higher.

CONTAINERIZATION IN INDIA

Land containers, were developed and introduced by the United States' railroads in the 1920s. These were then widely adopted by the European and Japanese railways after the Second World War, as the bearer of rationalization of cargo transport by rail.

The Indian seaports entered the containerized era by receiving the first container ship in Cochin port in 1973. Ever since the containerized traffic of the port has been steadily increasing. Quest for economy in transportation and reducing the labour content were the prime reasons for containerizing the cargo in the developed countries. While in international scene about 75-80% of the cargo is containerized, in India it is presently about 45% (Ramakrishnan [1999]).

Table 3 Growth of Container Traffic in Indian Ports

YEAR	Million TEUs
1980-81	0.13
1985-86	0.407
1990-91	0.681
1995-96	1.45
1996-97	1.70
1997-98	1.89
1998-99	1.92
1999-2000	2.21
2000-2001	2.47
2001-2002	2.89

Role of spirituality in motivation of Human Resource for sustainable growth

Hence, there is enough scope for further containerization of the cargo. The container traffic has been recording impressive growth particularly since 1992-93, in line with the increasing use of containers for all types of cargoes in international trade. The aggregate Container Traffic handled in the past twenty five years in Indian ports is shown in Table 8.6. In '1980-81 the container traffic handled was only 0.13 million IEU and it has increased to 2.89 million TEUs in 2001-2002.

Table 4 Container handling performance of selected Indian and Asian Ports

Ports	Average containers handled per ship hour
Haldia	6 to 7
Kolkata	7 to 9
Mumbai	8 to 10
Chennai	10 to 12
JNPT	25 to 30
Colombo	35 to 45
Bangkok	40 to 45
Singapore	75 to 85

Container handling performance of Indian ports are very less when compared with other Asian ports. Table 4 clearly justifies this argument.

THE ROLE OF CONTAINER FREIGHT STATIONS (CFS):-

CFS is a place where containers are stuffed, de-stuffed and aggregation/ segregation of export/import cargo takes place. With the growing volume of international trade, the need for expeditious clearance of goods at the port within the minimum possible time has been gaining importance. This is more so when the ports are facing congestion at their premises.

A CFS is an extended arm of Port/ ICD/ Aircargo Complex, where import/ export goods are kept till completion of their examination and clearance.

PRESENT PROCEDURE OF CLEARANCE OF GOODS AT CFS:-

The Main function of CFS is receipt, dispatch and clearance of Containerized Cargo, up-to-date inventory control and tracking system to locate containers/cargo.

The goods received at ports are brought to CFS and stacked in CFS after verification of the seal by Customs Officers. In respect of import consignment, the Steamer Agents/liners/ Importers desiring to take the consignment to CFS, file Import General Manifests in the port.

After obtaining the permission from the AC/DC, the Container moves to CFS under Customs escort or under bond and bank guarantee. The CFS allow de-stuffing of the goods. The CHA/ importer files the Bill of Entry at Customs House and then Customs formalities of assessment, examination and payment of duty are completed. Thereafter, Customs gives "Out of Charge" and the Custodian releases the goods from CFS by issuing a Gate-Pass.

In respect of exports, the goods are brought directly to CFS under a Shipping Bill. The export cargo in Less than Container Load (LCL)/ Full container Load (FCL) is received by the Custodian of CFS for safe custody. After stuffing of the goods, Container/ Customs Bonded Truck (CBT) is sealed by the Custom Officer and the same is removed from CFS for export through the desired Port.

ROLE OF ICD/CFS TO MAKE IMPORT AND EXPORT EASIER, AND INCREASE FOREIGN TRADE

- * Better customs checking/clearance/easier collection of taxes/revenue
- * Better transport links/easier transport to Gateway Ports and Airports /cheaper transport to Gateway Ports and Airports
- * Cheaper Container storage and handling facilities
- * Better cargo management

Role of spirituality in motivation of Human Resource for sustainable growth

- * Cargo Storage in sheds and open areas
- * Refrigeration available in most locations
- * Quicker processing / less time lost / avoid delays at Gateway Ports and Airports
- * Less congestion at Gateway Ports and Airports / eases pressure at Gateway Ports and Airports

THE DEFINITION OF INLAND PORT IN THE JARGON OF THE TRANSPORTATION AND LOGISTICS INDUSTRIES IS:

“An Inland Port is a physical site located away from traditional land, air and coastal borders with the vision to facilitate and process international trade through strategic investment in multi-modal transportation assets and by promoting value-added services as goods move through the supply chain”.

The term inland port is also used in a narrow sense in the field of transportation systems to mean a rather more specialised facility that has come about with the advent of the shipping container in international transport. Rather than goods being loaded and unloaded in such ports, shipping containers can just be transferred between ship and road vehicle or ship and train. The container may be transferred again between road and rail elsewhere and the goods are only loaded or unloaded at their point of origin or final destination.

Shipping containers allow some functions traditionally carried out at a seaport to be moved elsewhere. Examples are the functions of receiving, processing through customs, inspecting, sorting, and consolidating containers going to the same overseas port. Container transfer at the seaport can be speeded up and container handling space can be reduced by transferring functions to an inland site away from the port and coast.

Distribution may also be made more efficient by setting up the link between inland site and seaport as, say, a high-capacity rail link with a lower unit cost than sending containers individually by road. The containers are still collected from their origins or distributed to their ultimate destinations by road with the transfer happening at the inland site.

An Inland Port is just such an inland site linked to a seaport. This kind of inland port does not require a waterway. It is often written with initial capitals to indicate a difference to the common usage. Key features of an Inland Port are the transfer of containers between different modes of transportation (intermodal transfer) and the processing of international trade. This differentiates an inland port from a container depot or transport hub.

CONCLUSION:-

All the above facts brought into light in this paper will give a clear idea how the role of ports, CFS and ICD is important in the logistical development not only in India but all over the world. In near future, there is a huge scope for logistical development since the process of globalisation of trade is in progress. In case of India, there is more scope for developing new ports as present ports are congesting and the economy is developing with fast rate resulting into growth of foreign trade.

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