Chapter II

Review of Literature
REVIEW OF LITERATURE

In this section an attempt is made to review critically some of the studies carried to evaluate the importance of Infrastructure and Performance of Major Ports in India. The following are the studies which enabled the researcher to undertake this study. The studies on Infrastructure and Performance of ports exclusively Indian ports are scanty. Hence, the studies on infrastructure and performance of major ports in India are briefly reviewed here.

Rittwika Tamuli ¹ (2006), in her article on “NMDP-Catalyst for Growth” outlined the aims of National Maritime Development Programme and highlighted the port projects related to augmentation of port infrastructure, channel deepening, improving rail and road connectivity, mechanisation and modernisation. The break up of investment and funding pattern of port projects, development of minor ports through NMDP are highlighted in the article.

Subramanian.S and Illangovan.D ² (2007) in their study on “Challenges of Cargo Container Services in Major Ports in India” aimed to found out the challenges of cargo container services in major ports in India. It was found that specific areas have been identified for private participation and guidelines have been forwarded by the government. It was suggested that the government should link JNPT, Chennai, Tuticorin, Mumbai, Cochin and Kolkata with export related industries with express ways to ensure a streamlined movement of goods between different entities.

The Government should modernize all CFS/ICDs to world standards and also to make formal pleasant work environment among different persons like authorities, operators, labour and exports and imports by developing code of conduct for all port.

1) Rittwika Tamuli,”NMDP-Catalyst for Growth” Indian Infrastructure, Vol.IX, No.5, December 2006, pp. 68 - 71
Nagendra V. Chowdary\textsuperscript{3} (2007), in his article on “Sea Ports in India: An Overview” outlined the policy objectives, private participation and key issues related to productivity of major ports. He suggested to

1. Modernise and restructure the port sector.
2. Improve the inter-ministerial coordination.
3. Address the labour practices at the major ports.
4. To finalise the award criteria for concessions.

Kunal Bose\textsuperscript{4} (2007), in his article on “Port Privatisation: Unlocking Value”, highlighted the recent developments like joint venture, private and foreign participations and corporatisation of major ports. The areas of participation for joint venture between Indian major ports and foreign ports are

1. Construction of new port facilities within an existing port.
2. Improving productivity of an existing port.
3. Development of a new port. The implementation of joint venture schemes either by two ways a) a foreign port by promoting an Indian company in the form of a special purpose vehicle without equity participation by an Indian Port Trust. b) a joint venture company incorporated under Indian Port Act with a Port Trust as an equity partner.

Khanna, K.K and Gupta, V.K\textsuperscript{5} in their book “Economic Geography of India”, describe the various infrastructure facilities required for a port and gave the definition for harbour, docks, jetties, and highlights the essential characteristics of ports. It is suggested that ports will be developed in line with the developments in abroad, and attention will be given on night navigation facilities at all the major ports. The development and modernisation of existing port facilities should receive priority to improve productivity at ports.

\textsuperscript{5) Khanna, K.K and Dr.Gupta, V.K, Economic Geography of India, New Delhi, Sultan Chand and Sons-2005. pp. 434-443}
Pradeepta Kumar Samanta (2005), in his article on “Private Sector Participation in Transport Infrastructure Development: A Study of the Port Sector”, analysed the present state of transport infrastructure in general and scope for increased level of private sector participation in the port sector in particular. It was pointed out that the average turnaround time of Indian ports are high and the existing Indian port infrastructure suffers problem owing to operational constraints like breakdown of port equipment and usage of obsolete cargo handling equipment, inadequate facilities for dredging of berths and channel inefficient and non-optimal development of port equipment and excessive reliance on labour intensive methods of bulk handling of cargo.

Anand. A (2005) in his article on “The Sethusamudram Ship Canal Project – Empowering the Port Sector”, describes the various dimensions of Sethusamudram Ship Canal Project and the main benefit will be to Tuticorin port, as the commercial operation will originate from this port. It is concluded that delaying the SSCP will go up and no doubt that the project will bring up so many commercial and economic benefits.

Raguman.G, in his article on “Jawaharlal Nehru Port Trust”, pointed out congestions at Jawaharlal Nehru Port Trust and solutions in the form of short-term, medium term strategies and immediate strategies. It is pointed out that the road and rail development would need to be considered, operation of fourth container terminal and additional CFS infrastructure etc.

Rama Krishnan.R (2004), in his article on “Thrust on Port Development”, describes port is an important infrastructure for socio-economic development. It is pointed that ships have to wait for long in the channel for berthing and the productivity of unloading/loading is so low that ships waiting out at berth increases quickly considerably compared to international standards. It is suggested that the privatisation gives the following benefits 1) port development, 2) increased productivity, 3) better management 4) flexibility in operation 5) use of latest equipment.

Joseph Fonseca 10 in his article on “Port Privatisation Skewed”, describes that when operations get monopolized it results in a backlash not necessarily beneficial to the trade. Indian players allege that the eligibility norms for private sector participation in port development projects, by their very provisions have marginalized Indian companies. Overseas players have elbowed out local companies, grabbing whatever patches of the Indian port sector is being thrown open to privatisation.

It is pointed out that the market forces dictate the privatisation of port sector, the government needs to address the issues of reforms and simplification of the customs regulations and documentation. Government policies need to be fine tuned to ensure that EXIM traffic towards Far East and other countries to the East of India move through port on the East coast and towards countries to the West of India move through the port on the West coast.

Nair.P and Deepak Kumar\(^{11}(2006)\) in their study on “Visakha Container Terminal Project” pointed out that the Rs.125 crores Viskha Container Terminal Private Limited, a joint venture of Dubai Ports World and United Liner Agencies of India to have an edge over other ports, including Mumbai as far as the hinterland and sea connectivity is concerned.

It is mentioned that the success of Viskha Container Terminal are,

1. World class infrastructure
2. Savings in money and time
3. Government incentives
4. Direct liner facility
5. Natural depth

Ennarasu Karunesan\(^{12}(2005)\) in his study found that imposing a congestion surcharge on loaded and empty container hardship to the trade. It is pointed out that frequent strike by terminal workers at P&O ports- owned Chennai container terminal have continued to throttle its growth.

A book “Industry Insight- Indian Logistics” published by Cygnus Business Consulting & Research\(^{13}(2005)\) is pointed out the container traffic registered a growth of 15 percent over the last five years [2000-01 to 2004-05] although the pace of containerisation in India is still sluggish by global standards. The aggregate capacity at the major ports in India has been in excess of traffic handling in the 2000 onwards. The capacity utilisation dropped from 107 percent in 1999-2000 to 88 percent in 2003-2004. The study concluded that under utilisation is due to 1) Hesitation of major shipping liner to bring mother container ships for handling at Indian port, 2) Poor utilisation of EDI and online tracking systems, 3) Poor road and rail connectivity.


Sampath.R(2006)\textsuperscript{14}, in his study on “Major Ports- Huge Capacity Build-up”, pointed out that the NMDP programme envisages as investment of Rs 55,804 crore in 276 projects at major ports through the public-private participation route in next six years in two phases.

It is pointed out that private participation will be in construction, management and operation of berths and terminals. It is concluded that the annual cargo handling capacity by the 12 major ports is 820 million tonnes by 2011-12 from 397.50 million tonnes in 2006.

Nikil Modi\textsuperscript{15}(2006), in his article on “Indian Major Ports Climb Higher”, pointed out that the major ports posting 10.3 percent growth in cargo handling in 2005-06, all major ports handled 423.41 million tonnes of cargo traffic, compared to 383.75 million tonnes of cargo handled in 2004-05. It is mentioned that Visakhapatnam Port is emerged as the highest cargo handling port of volume, in terms of rate of growth of traffic Mumbai topped the list of all major ports in the country.

Gokulan.C.N\textsuperscript{16}(2005) carried out a study on “Traffic Potentials of Major Ports”. Purposive Convenient Sampling Method was adopted to draw a sample of 30 companies. The study is focused on ascertaining the potentials of traffic by analyzing the ports should provide adequate infrastructure to perform the handling operation and the government should extend automatic approval for acquisition of new ships by foreign investors. It was suggested that shipping companies should be allowed to retain if sale proceeds of their ships and utilize them for fresh acquisition.

Dharshanna\textsuperscript{17}(2006) in her study on “Infrastructure Facilities in Major Ports”, pointed out that Indian major ports suffering infrastructural problems and suggested some solutions to overcome the infrastructural scarcity. The Build Own Operate [BOT] Built Own Operate Transfer [BOOT] and joint venture models were suggested, for construction and operation of container terminals, construction and operation of bulk, break, multipurpose and specialized cargo berths.

Shubhra Puri\textsuperscript{18} (2003), in article on “Unions Stall Corporatisation Ennore Port Remains a Flash in the Pam” analysed the strategy for corporatise the ports in India. It was envisaged that corporatisation would process in a fashion for the rest of the major ports. JNPT and Haldia, both profitable ports were next on the list. It was pointed out that the only problem of corporatisation is a strong anti-corporatisation lobby of the employee unions of the major port trusts. It was concluded that the government should formulate and implement a clear strategy to improve the major ports.

Basistha.P.P\textsuperscript{19} (2008) in her article pointed out that complete connectivity with north Indian Inland Container Depots (ICD’s) and Container Freight Stations (CFS’s) with Jawaharlal Nehru Port (JNPT) have become much requisite on account of growing volumes of containerised cargo traffic. It was concluded that a separate connectivity link would be greatly beneficial to the container train operators, as this will enable them to provide a fixed transit schedule to the shippers.

\textsuperscript{17} Dharshnna (2006),“Infrastructure Facilities in Major Ports”, Master of International Business, PSG College of Arts and Science, Coimbatore.


Dr. Krishnaveni Muthaiah\(^\text{20}\)(1997), in her book on "Logistics Management & Seaborne Trade" listed the major problems at Indian ports. The major problems are 1) Ships have to wait long, to get berthing space, 2) The low productivity increases ship berth days, 3) Handling in labour intensive, hence susceptible to low productivity, 4) Available equipments are outdated and hence have low efficiency, 5) Draft restrictions in the navigational channels retrain calling of bigger vessels.

She has suggested the following remedies,

a) Increase the productivity by substitution of labour intensive operations and mechanisation, b) Streamline the maintenance of equipment and construct adequate berths, c) Dredging of channels to cater for deep drafted vessels.

Salil Ganga\(^\text{21}\)(2003), in her research article pointed out the potentials of New Manglore Port Trust on liquid Cargo. The POL and Crude traffic through Mangalore Refinery and Petrochemicals Limited [MRPL] account for more than one-third of the total traffic handled at the port. It is concluded that the port is proposed to take up a number of development projects, which will increase the handling capacity of the port. The port proposed to undertake the construction of a multi-purpose berth for general cargo at the port at a cost of Rs 420 million.

Ramakrishna.R\(^\text{22}\)(2002), in his article pointed out that privatisation has become an instrument used by many countries mainly to improve efficiency, resource mobilization and industrialized countries like Italy, France, Japan and Spain have launched major privatisation programme.


Kurup N.K\textsuperscript{23} (2000) in his study on "Corporatisation of Ports" pointed out that JNPT’s net surplus grew from Rs. 622 million in 1955 to Rs. 2,355 million in 1999 and its debt burden too increased significantly. It is mentioned that the JNPT has appointed consultants for valuation of its assets and liabilities. The debt-equity profile will change when the debt is needed by the company set up for operating and managing the port.

Ayyappan V\textsuperscript{24} (2005) in his study on "A Long Road to Connectivity Port", attempted to focus on port connectivity issues- both physical and virtual. It is pointed out the capacity of the port sector has gone up over the years, necessary connectivity infrastructure has not kept. Since ports are meant to handle the import, export and domestic cargoes, connectivity to ports by roads, railways, and by water should be to the centers which generate and consumes cargos. It is concluded that to maximize the efficiency of physical infrastructure to have a functional virtual infrastructure with a single coordinating authority is vital.

Anto T. Joseph\textsuperscript{25} (2005) in his study on "Let There be More Port Infrastructure- P&O Ports Infrastructure Development in India", revealed the importance of container terminal including a Greenfield project. It is mentioned that P&O ports contribute to India’s port infrastructure and become a catalyst in the international trade. The P&O ports projects range including Thakur Container Freight Stations, Mundra Port and Chennai Container Terminal.

Chandrasekaran.G (2002), conducted a study on "Privatisation of Container Terminal in Tuticorin Port" aimed to assess the significance of privatisation process, ascertain the existing container handling facilities in PSA-SICAL Container Terminal and analyse the contribution of the privatisation system in the operational efficiency of PSA-SICAL Container Terminal. This study revealed that the privatisation of the container services will help to increase the efficiency of logistics practices in Tuticorin Port. The study pointed out that the port users are awaiting for direct mother vessel operation facilities in Tuticorin Port. It was concluded that Tuticorin Port should increase the draught level of basin and approach channel to improve container vessel services.

The above research analyse Infrastructure Development of Indian Ports and private participation in major ports for infrastructure development. The performance of the ports is not analysed in the earlier studies. Hence the researcher has made a modest attempt to study the Infrastructure and Performance of Major Ports in India. The study analyse not only prevailing infrastructure of major ports in India but also their performance. The port users of Chennai and Tuticorin ports are interviewed to assess their opinion on infrastructure and performance of these ports. It is to record that this study analyse infrastructure and performance of all major ports in India. Hence this study is a novel attempt surpassing the earlier research studies on infrastructure and performance of major ports in India and abroad.