

Development of Port & its Socio Economic Effects on Hinterland

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ABSTRACT

Transportation sector is a strong factor in terms of economic and regional balanced development, also having a great influence on national integration to world economic market. Ports constitute an important economic activity in coastal areas. In addition to the complex logistical setting in which maritime shippers and ports are operating, port hinterlands have received renewed attention. The integration of transport functions provided by logistics and the re-orientation of maritime networks have redefined the functional role of ports and have generated new patterns of freight distribution and new approaches to port development. Ports are important for the support of economic activities.

KEYWORDS

1. Transportation
2. Hinterland
3. Logistics
4. Maritime networks
5. Port development

INTRODUCTION

Port development is non-linear by nature. Other researchers stress that in order to understand the process of port development, it is necessary to differentiate between 'growth' and structural transformation. India has a rich history of trade across seas. According to Ministry of shipping, around 95% of India's trading by volume and 70% by value is done through by maritime transport.

❖ What do you mean by hinterland?

The basic question we all had in a sudden time. Hinterland means a rural territory surrounding a urban area especially a port. The hinterland remains a fundamental component in the port and maritime shipping industries. The density and extent of hinterland shapes inland freight distribution and port operations. Regionalization represents a new phase in the development of port systems, which has traditionally focused on the port itself. Port authorities are invited to embrace and enhance the regionalization process in view of addressing current port-related challenges, mainly congestion, growing costs, limited handling capacity and the generation of additional

traffic while being able to answer the requirements of modern freight distribution. With a more efficient access to the hinterland, mainly through modal shift, port competitiveness is thus increased. This also leads to questions with respect to the limits of port regionalization in terms of capacity and cost efficiency.

MAIN TEXT OF PAPER

Maritime Hinterlands is also known as short sea shipping. The short sea market is generally fragmented and underdeveloped. The short sea shipping market in the INDIA is largely captive, and the traffic that is in direct competition with road is very limited. The situation in the US is similar.

FOR WHICH PORTS GENERALLY HINTERLANDS ARE USED ?

The objective of major ports is to be elected as port of call by a large shipping company and by mega-alliances. Because not all ports can achieve the hub role within the maritime freight system, it could be an advantageous strategy for port authorities to grasp the opportunity to develop SSS types of ports, rather than compete as hubs. SSS traffic is seen as a means of helping secondary ports survive. However, there is a vicious circle: because the smaller ports do not have the cargo volumes to fill ships they cannot attract the carriers to provide a regular service; and because they cannot provide a regular service they cannot attract new customers.



Figure 1. JNPT PORT

❖ *WHY DO WE NEED PORT DEVELOPMENT ?*

Because ports are natural growth engines for their respective economies around the world and the world needs economic growth more than ever.

Because the potential is tremendous for more development. Trillions of dollars, thousands of operators, developers, cargo owners, and hundreds of concepts and models.

A BRIEF OUTLINE WHAT COMES NEXT

Table 1 :- Requirements for port development

The Potential	Covers the vast potential for ports to attract customers, partners and investors as well as fast-tracking development and expanding scope.
The Challenge	Covers the challenges to tap this potential including global coverage and how decision makers discriminate.
The Solution	Lays out the Port Investor solution explained as a simple 5-step process as follows :- Step 1 - Foundation Step 2 – Exposure Step 3– Engagement Step 4 – Development Step 5 – Deal

CHALLENGES AND EMERGING ISSUES IN PORT DEVELOPMENT

A port is essentially a point where goods are transferred from one mode of transport to another. In an era of economic globalization ports are evolving rapidly from being traditional land/sea interfaces to providers of complete logistics networks. This means that ports have had to face many challenges due to unpredictable environmental changes and trends in the shipping, port and logistics industries.

Most ports in the world have paid (or should pay) attention to these challenges and emerging issues, such as:

- globalization of manufacturing and outsourcing
- global trends of logistics network restructuring and reposition of regional and/or local distribution centre
- rapid growth in volume of world freight, especially container
- increase of transshipment cargo and competition among ports and terminal operators
- introduction of the super mega size containership
- increasing competition towards hub ports
- emerging global terminal operators and their growing market share
- one stop shopping concept and intermodal transport linking strategically between ocean, railway, road and inland waterway
- increasing role of ports in global supply chain management and logistics network structures
- increase of productivity and efficiency in ports
- high cost and constraints for developing port facilities.

To cope with these challenges and emerging issues ports across the world have been trying to develop their physical infrastructures, especially container terminals and related facilities, and to expand their port hinterland through introducing free trade zones with a hope of developing hub ports and international logistics centres. In addition, many ports have been carrying out port reforms such as port governance restructuring and deregulations, private and public partnership.

For privatization basically there are three distinct and essential elements of a port which should be carefully considered:

- port regulator
- port landowner
- port operator

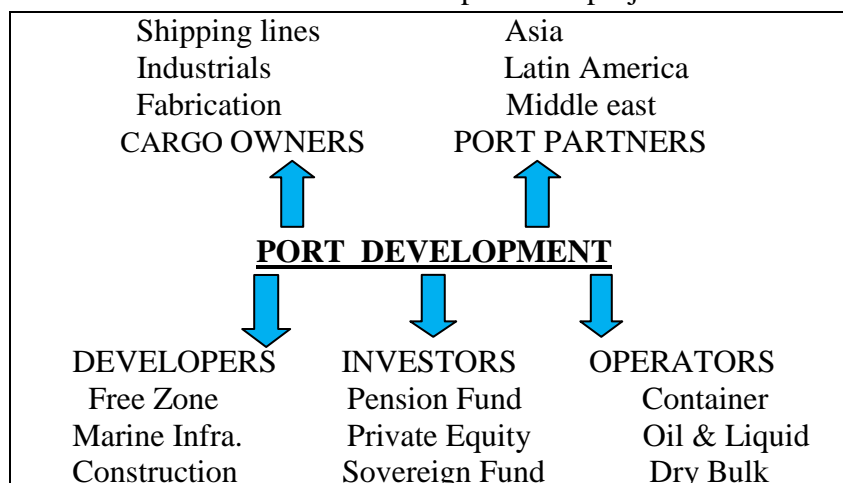
Firstly, regulatory activities within a port will generally be related to duties and responsibilities such as enforcing regulations and providing pilotage services and vessel traffic management, most of which will have been established by statute. This function traditionally is conducted by a government body. A port authority may also be expected to monitor the performance of the port, coordinate policy making with local and national government bodies, plan for future expansion, and market and promote the entire port and its facilities to users.

The second element is port land. The key tasks a port landowner will need to undertake include:

- managing and developing the port estate
- conceiving and implementing port policies and development strategies
- supervising major civil engineering works
- providing and maintaining channels, breakwaters, locks, turning basins, berths, piers and wharves
- providing or arranging road access to the port complex.

The third element is operations, which may include a range of value-added activities and free trade zone related activities within the port estate. Most private participation takes place in this element.

TABLE 2. A new model for ports and project owners



Make in India-Ports and Shipping

The Indian Minister of shipping, road transport and highways, Mr. Nitin Gadkari announce a massive investment in India's Port and road sector, which is likely to help boost the country's economy. The Indian government plan to develop 10 coastal economic regions, as a part of plan to revive the country's SAGARMALA project. The government is also looking to develop the inland waterways sector as a alternative to road and the railway route.

Summary:-

- 118 projects involving investment of INK 503 Billion approved in last 4 years.
- 55 Public Private partnerships (PPP's)(Provide greater flexibility to the parties involve).
- 12 major ports.
- 64 non-major ports handling EXIM (export-import) cargo.
- 1605 million metric tonnes in cargo capacity.
- INR 175 billion invested in last 3 years

Reasons to Invest :-

- 2422 million metric tonnes of cargo handling capacity required in Indian ports by 2021-22.
- For this, additional cargo handling capacity of 901 million metric tonnes is required to be created in Indian port in the next 6-7 years.
- Special Economical Zone are being developed in close proximity to several ports-comprising coal-based plants, steel plants and oil refineries.

Growth Drivers:-

- Increase trade activity and private participation in port infrastructure.
- Rising cargo traffic and an increase in the number of non-major ports.
- Existing ports are investing on their draft depth.
- Focus on the development of terminals that deal with a particular type of cargo for eg. LNG

To attract investment for the growth of the sector, the government has allowed 100% foreign direct investment (FDI) in shipping sector.

The government of Maharashtra plans to come up with policy by January 2016 for developing parts along the 720 km long cost line of the state, including development of creeks at Vasai, Jaigad for coastal shipping.

❖ Research Methodology :-

The present researches purpose, regarding the results that can be beneficial for ports' hinterlands, is assumed to be a practical research and with respect to the problems' essence, type, goals, they used the descriptive method and for gathering information we checked on website plus field visit.

It is Maharashtra's Jawaharlal Nehru Port Trust (JNPT).

THE BIRTH OF JNPT

The Jawaharlal Nehru Port Trust (JNPT) at Navi Mumbai (formerly known as the Nhava Sheva Port) located within the Mumbai harbour on the west coast of India, was commissioned on 26th May 1989. It occupies a place of prominence among the major Indian ports. It is the second youngest and one of the most modern major ports of the country. Being one of the oldest ports in India, the Mumbai port was proving to be structurally inadequate to meet the requirements of modern cargo handling. Shallowness of the channel, congestion of roads and railways through the Mumbai city linking the port to its hinterland, as well as labour problems, including over-manning, were among the major problems ailing the Mumbai Port in the pre-reform days. Though it was initially planned to be a "satellite port" to the Mumbai Port with the purpose of decongesting traffic at the latter, eventually it was developed as an independent port on its own right and it became the country's largest container port. It was built with an investment of Rs.1,109 crores, out of which Rs.956.97 crores were obtained as loans from various funding agencies, with the World Bank being one of the major contributors. Today JN Port is fully mechanized port which uses latest technology in handling of cargo at the terminals and presently handles about 40% of India's container cargo.

TERMINALS:-

- Jawaharlal Nehru Port Container Terminal (JNPCT)
- Nhava Sheva International Container Terminal (NSICT-DP World)
- Gateway Terminals India (GTI-APM Terminals)
- Bharat Petroleum Corporation Limited(BPCL)

SERVICES:-

1. MARINE SERVICES.
2. SHIPPING SERVICES.

VESSEL TRAFFIC MANAGEMENT SYSTEM:-

Regular coordination of vessel movement is being carried out through collection, verification, organization and dissemination of information through this system.

Marine Conservancy and Pollution Control:-

- Anti Pollution measures:

The pollution control cell carries out regular inspection and control checks on all vessels entering the port.

❖ OIL SPILL RESPONSE FACILITIES AT JNPT :-

1. To combat the oil spill around JNPT and Mumbai Harbour, a common oil spill response Tier- I facility (spillage upto 700 MT) is set up at Jawahar Dweep, Mumbai Port Trust by placing the Work Order on M/s.Sadhav Shipping Ltd., Mumbai as per the Memorandum of Understanding between Mumbai Port Trust, Jawaharlal Nehru Port Trust and other public and private sector oil companies.
2. JNPT has also carried out the oil spill risk analysis and prepared the contingency plan based on the risk analysis conducted by National Oceanography and same has been vetted by Indian Coast Guard.

❖ JNPT FIRE SERVICES :-

JN Port is having full fledged fire service with centralized Fire Station running round the clock with qualified and experienced fire professionals trained from National Fire Service College, Nagpur.

The following fire protection facilities are available at JN Port :-

- 1) Fixed Fire Fighting System.
- 2) Mobile Fire Fighting System.

ADVANTAGES OF PORT ON NEARBY AREAS

1. Road Infrastructure:

JN Port is connected by National Highway- 4B to Mumbai - Pune Highway/ Expressway (NH-4) and Mumbai - Goa Highway (NH-17). JNPT is also connected through State Highway- 54 & Amra Marg to Navi Mumbai area, Thane, Nashik & Ahmedabad. A Special Purpose Vehicle (SPV) formed by National Highway Authority of India (NHAI), JNPT and CIDCO viz. Mumbai JNPT Port Road Co. Ltd has taken up the work of 6/8 laning of NH-4B, SH-54 & Amra Marg. The estimated cost of the project is Rs.3220 crores and total length to be widened is 43,91Kms

2. Rail Connectivity:

The Port is connected to the national network of the Railways through the Panvel- Uran section of the Central Railway. Panvel is further connected to Konkan Railway. Diva on Central Railway and Vasai (Bassein Road) on the Western Railway. Recently, the railway line between JNPT and Panvel has been connected into a double line, to meet the requirements of increasing container traffic through ICD'S. The Ministry of Railways has planned for a dedicated freight corridor connecting JNPT with the Northern hinterland.

C. Centralized Parking Plaza:

The JN Port has decided to develop about 45 ha. area parking in Phases. The Phase-I work is completed. In this phase, 22-hectare area is developed up to water bound macadam (WBM) stage. This parking area is put to use. For the second phase of 23 hectors work is awarded to M/s PP KharPatil Construction Pvt. Ltd., in June 2015. The contractor has commenced the work in October 2015 and as of June 2016, 70% work is completed. This parking area is expected to be completed up to water bound macadam stage by December 2016.

D. Environmental aspects:

Port's ambient water and air quality is being monitored monthly through NETAL India and the results are generally found within the prescribed limits. Port has developed about 1100 ha. of the green area including mangroves. Plantation of about 15,000 saplings was carried out during the year 2015-16. The Port has taken up various projects for use of renewable energy in Port's Operational area.

E. Deepening and Widening of Mumbai Harbour Channel and JN Port Channel (Phase-II):

The Detailed Project Report for Deepening the channel from 14mtrs. (Phase-I) to 15 meters. The Port has appointed M/s. Fine Envirotech for EIA Studies and online application for approval of TOR is made to MOEF. The Port is in the process of appointing Project management Consultant for the project. For model studies & magnetometer survey, Port has appointed M/s. CWPRS & NIO respectively.

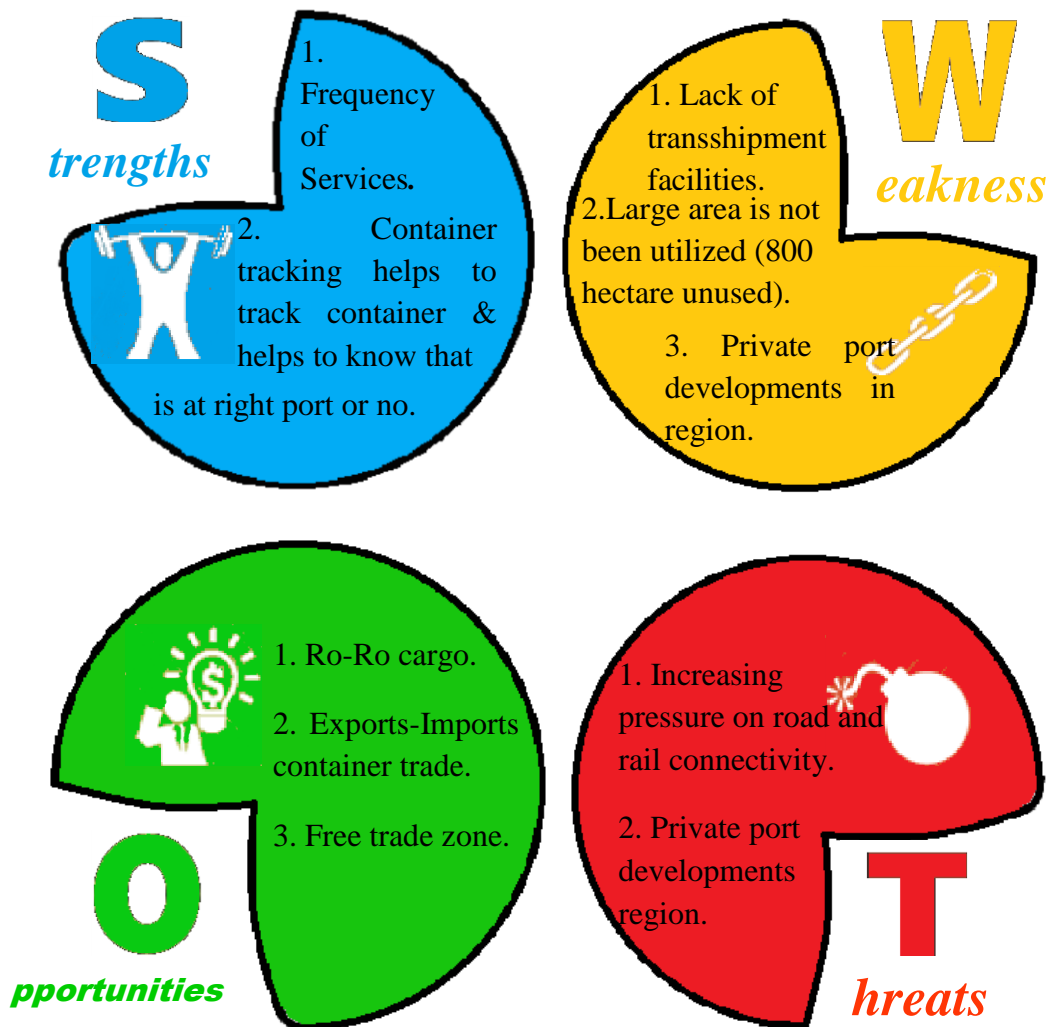
F. Development of Port based Special Economic Zone:

The proposed Special Economic Zone at Jawaharlal Nehru Port is the first-of-its-kind at a major port complex in the country, and would be developed on 277.38 hectares of land along the Panvel-Uran road connecting the cargo terminals to state highways.

PROBLEMS FACING BY PORT AUTHORITIES

1. Because of loud honking the nearby village area facing problems.
2. Poor local transport system :- The local transport system from main highway to port location is poor. Roads are not in good condition, creating problem to carry container from port to desired location.
3. Piling up of cargo containers :- Cargo continue to pile up at all the three terminals, as talks to resolve a nearly month-long labour dispute over wages at one of its private terminals remained inconclusive
4. Had to wait longer to get the cranes besides being a government port.
5. It ended up having dissimilar crane from different manufacturers which made the job of maintaining them complicated and expensive
6. Expansion plan are in trouble.
7. Much of the business moving to new ports like MUNDRA.

SWOT ANALYSIS ON JNPT



Prime Minister Narendra Modi on 14 April 2016 inaugurated the Maritime India Summit 2016 (MIS 2016) in Mumbai. While inaugurating the summit, the PM invited investors to come to India. It organised special sessions on investment opportunities in Port Modernization and New Port Development, Hinterland Connectivity Projects and Multi-Modal Logistics Hubs, Inland Waterways and Coastal Shipping for Cargo and Passenger movement etc.

CONCLUSION

In an era of globalization the maritime market environment is substantially changing. A basic driving force in this process consists of structural shifts in the economy, particularly regarding a shift from supply economy (carrier-based) to demand economy (shipper and trader-based). The current issues port managers are facing are multiple and complex which includes logistics chains are the relevant focus in port competition, Port hinterlands are being redefined by changes in the logistics industry and the regionalization of port terminals, containerization seems to have become a 'must' for ports and many more. The more international the maritime industry becomes, the more energy will have to be put in embedding ports in their local communities. A PORT WITH A STRONG ENVIRONMENTAL RECORD AND A HIGH LEVEL OF COMMUNITY SUPPORT IS LIKELY TO BE FAVORED.

**'THE WILL TO WIN MEANS NOTHING
WITHOUT THE WILL TO PREPARE'**

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