International Journal of Early Childhood Special Education (INT-JECSE)
ISSN: 1308-5581 Vol 14, Issue 03 2022

STUDY AND ANALYSIS OF THE DEVELOPMENT OF DRY PORT -AT CHENNAI, TAMILNADU

Prof Dr.D.Rajasekar[1] **and S.Aravindan**[2]
HOD-AMET Business School & Dean Research, AMET Deemed to be University, 135, East Coast Road, Kanathur, Chennai 603 112 India.E-Mail: rajasekar.d@ametuniv.ac.in

[2]S.Aravindan, Research Scholar, AMET Deemed to be University, 135, East Coast Road, Kanathur, Chennai 603 112 India. E-Mail: er.aravindans@gmail.com

ABSTRACT
This paper review the Study and Analysis of the development of Dry Port at Chennai. Current Scenario in Port operations logistic plays major role inland Frieght Terminals. locations close to Industries and analysis on cargo movement and traffic analysis on the existing ports in the East coast has been performed with reference to the Chennai Ports, situated in Tamil Nadu. Vessel size analysis has been performed in order to know what type of vessel, Containers expected to come to the port, in accordance with to Indian Port Association. The East coast ports handle about 62% of total Container , General Cargo & liquid bulk vessels which are called at Indian Major Ports of East Coast by Chennai.

Key Words: Port Planning, Vessel Size, Traffic Analysis, Cargo Movement, Port Facilities

INTRODUCTION

Essential to make a Study and Analysis of traffic and feasibility study before planning or designing a Dry port . A project plan includes the feasibility study which is done to determine the best way to satisfy a particular requirement. Dry port defined as inland Terminal to which shipping companies issue there own import bills of loading import cargos and issue their own bills of lading for export cargoes. Dry port are classified as by distance close dry port, mid range dry port, Distant dry port. Dry port have concept of advanced logistic platforms to develop optimization of operations.

NEED FOR DRY PORT

Tamil Nadu contains coastal area from Chennai to Cape Comorin. Tamil Nadu lists two government port in major and one PPP mode major port. Whereas 7 government ports, 15 captive ports and ship yards are available including ports on planning and construction process at Tamil Nadu. Chennai is one of the areas preferred Containers by Industries is to develop an intermediate Dry Port between Chennai port and Industrial Corridor. Kattupalli port, is a private port, is also act as an intermediate between Chennai port and Industrial Corridor.

OBJECTIVE OF STUDY

The goal of this Paper is to contribute to filling the gap by introducing and describing the freight distributing system based on present Port and proposed Dry Port from the point of view of optimizing challenges at different levels like Comprehensive synthesis of Dry port concept and management of Dry-Port freight transport system based on Chennai Port and industrial Corridor. The advanced logistic platforms represent recent and evolution in freight logistics need to develop specific optimizations and methods of planning and managing the distribution networks with hierarchical relationship and mutual influence of the different components. Strategic planning of container distribution network is represented by one or more dry ports. Dry Port Mainly essential in the Containerized Goods transportation process to Customs & recall. It can be classified to Different planning and decision levels, long term or Strategic decisions, Mid term or Tactical planning, Short term or Operational levels.

DOI: 10.9756/INT-JECSE/V14I3.494

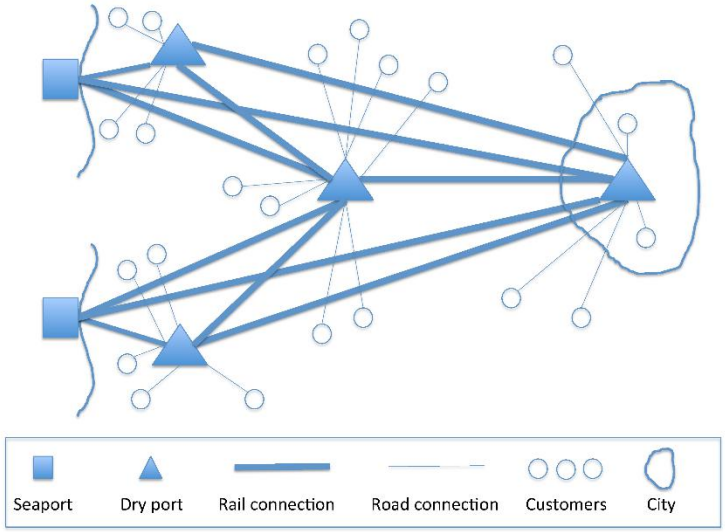


Figure 1: A system with two seaports, two close dry ports, one midrange dry port and one distant dry port.

Problems Analysis

The aim of this paper is to study of methods for optimal planning of transportation process on multi level proposed dry port intermodal system. Dry port system includes the role of Customs service providers , integration and co ordinations of different service operators in Chennai port

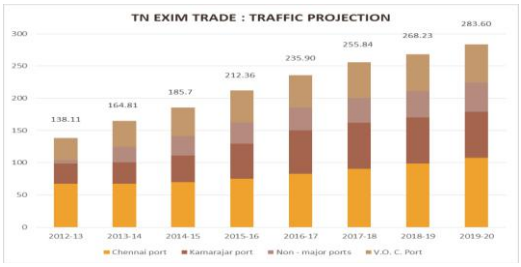
Tactical level planning, to solve decision on problems different methods to optimization of in Maritime transportation. Shuttle service by defining and optimizing the container transhipment daily basis to meet the demand in Chennai Port. Inland Shippers within a Time window problem, loading & unloading operation at Chennai port at a certain time instant. Container cargo demand assigned more than one sea port ,use service network design model ,selection, scheduling, routing from Chennai port.

Commodity wise Traffic projections

COMMODITY	**POTENTIAL**
Hyndai India Ltd	**39.6**
Ford India Ltd	**13.8**
Other Car Industries	**63.9**
Saint Gobain India Ltd	**5.9**

DOI: 10.9756/INT-JECSE/V14I3.494

CONTAINERS	**83.1**
OTHERS	**47.3**
TOTAL	**283.6**



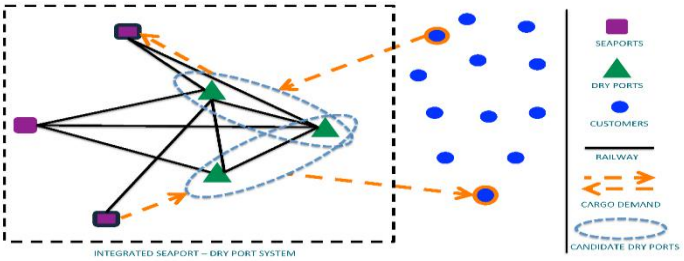
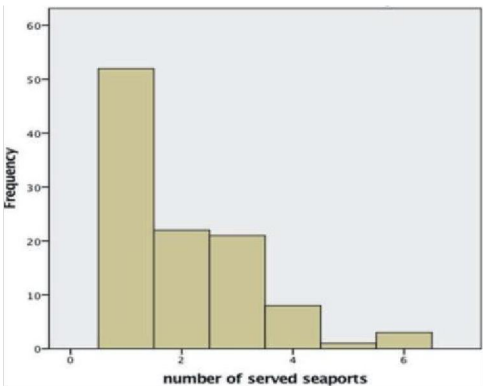


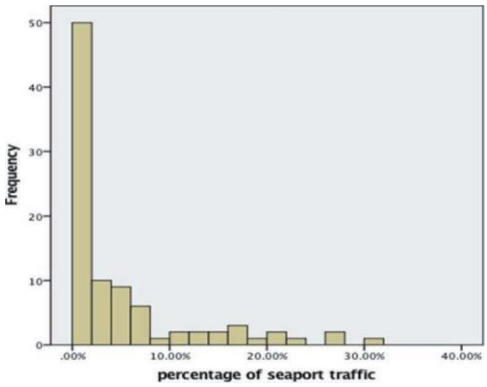
Figure 2: Sketch of the cargo demand within the considered tactical planning problem.

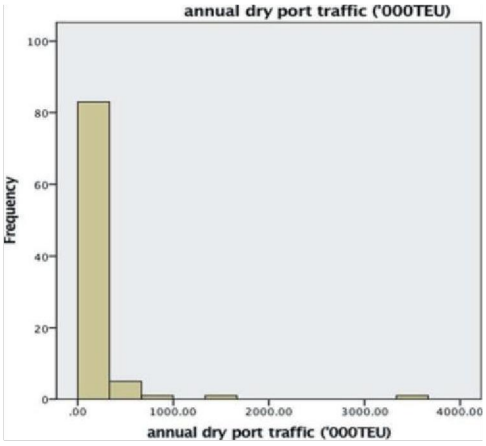
Tamilnadu EXIM Traffic Growth Projections

Year	**2012-2013**	**2013-2014**	**2014-2015**	**2015-2016**	**2016-2017**	**2017-2018**	**2018-2019**	**2019-2020**
Chennai Port	67.62	67.7	69.99	75.22	82.66	90.73	98.9	107.22
Kamarajar Port	31	33	41.39	54.39	67.44	71.44	71.44	71.54
Non Major Port	5.4	24.2	29.7	33	35.2	38.3	40.8	45.4
V.O.C Port	34.09	39.91	44.62	49.75	50.6	55.37	57.09	58.94
Total MMTA	**138.11**	**164.81**	**185.1**	**212.36**	**235.9**	**255.84**	**268.23**	**283.6**

DOI: 10.9756/INT-JECSE/V14I3.494







MARKET STUDY

Present and Future scenario for developments in the vicinity of Dry Port:

The estimation of the future cargo-handling demand for the proposed Dry Port development is one of the most important tasks in the whole feasibility study. The estimated future demand becomes the basis for determining the port capacity, the size and the rate of investment for the port development.

Container ship:

Container ships cargo demand increases day by day characterised by time and seaport terminal handling capacity with storage. Due to shortage of land, traffic conjunction, delay in customs clearing need of dry port. A re cargo ships that carry their entire load in truck-size intermodal containers, in a technique called containerization. They are a common means of commercial intermodal freight transport and now carry most seagoing non-bulk cargo. Container ship capacity is measured in twenty-foot equivalent units (TEU). Fresh vegetables are been exported in containers in large quantity in containers from cuddalore to many countries. Certain type of cargoes are refrigerated, certain been salted and few been exported in its own state depending on its decaying quality. Assume that 3000-5000 TEU's capacity handled in container terminal.

DOI: 10.9756/INT-JECSE/V14I3.494

Chennai is a Capital city of Tamil Nadu, southern India. It lies East coast of the Bay of Bengal. The Chennai port, has infrastructure such as breakwater, administrative buildings and berths loading and unloading Genaral Cargo and Container berth with crane facility and storage land, Liqiuid Berth & RoRo berth also available for liquid cargo and Automobiles Chennai port is located geographically in such way that many districts like Salem, Villupuram, Trichy, Coimbatore etc will be connected via road, rail and inland and Chennai port has good steep bathymetry in a very short distance away from the shore. These steep contours make way to sail ships across this coast. With a little bit of dredging the water front can be made deep enough for the entry of even Panama.

LIST OF CFS IN CHENNAI:

Name	**Location**	**Reference distance**
A.S Shipping	Thiruvallur	40km
Global Logistic	Ennore	25km
Balmer Lawrie	Meenjiur	20km
Calyx Containers	Meenjiur	20km
Concor CFS	Ennore	20km
Chandra CFS	Thiruvallur	40km
Ennore Cargo Container	Ennore	20km
Sanco trans CFS	Meenjiur	20km
Satva Hi Tech and Conware	Ennore	20km
Sical CFS	Royapuram	10km
STP Services	Chennai	10km
Adani Kattupalli	Kattupalli	30km
Sudharsan CFS	Chennai	10km

Table 2. SWOT analysis for Dry port Chennai – Tamil nadu

STRENGTHS	**WEAKNESSES**
Privatization - No Government interference or externally imposed budget constraints	High levels of competition suppressing freight rates and Charges
High traffic flow to hinterland industrial areas reduced	Over-utilization of infrastructure especially road
Well-developed infrastructure Comprehensive cargo handling Equipment	Over-reliance on road-transport Traffic congestion in hinterland Areas
Economic development Can attract loan capital for financing terminal investment	Traffic regulations—night-time restrictions and congestion charges
OPPORTUNITIES	**CHALLENGES**
High revenue to government from Trade increase and reduction of time	Volatile or unsustainable freight Rates and security
Advanced Logistic platforms with Multimodal transport connections	Control of imported products Anti smuggling and anti terrorist security measures
Globalization of trade Economic growth from International Trade	Trade imbalance Increase in freight rate charges
Attraction of loan capital for financing	Pressure on terminals in urban areas to be converted to other uses Environmental legislation

Methodology to Access and Analysis of Dry Port Traffic

Action	**Activity**	**Target**
Step-1	Determine extent of hinterland and economic activity in the hinterland	Industrial developments Industrial Infrastructure Major companies

DOI: 10.9756/INT-JECSE/V14I3.494

Step-2	Determine potential cargo mix	❑ Dry & Liquid Bulk, Break bulk, Containers
Step-3	Undertake potential competing Port for assessed Traffic	❑ Kattupalli Port ❑ Kamarajar Port ❑ Chennai Port ❑ Karaikal Port ❑ VO C (Tuticorin) Port
Step-4	Cargo analysis	❑ Market dynamics ❑ Potential sources - major companies,industries or Sectors
Step-5	Assess cargo potential for a new Dry port Facility	❑ Port competition ❑ Macro-economic considerations

REPORT KEY FINDINGS

The Key findings & rationale for developing a new Dry Port facility has been summarized hereunder in brief.

1) Targeting the Containers traffic requirements of proposed Dry Port for the primary potential in Chennai Industrial Corridor
2) Proposed expansion of saint Gobain industries to increase in export by 30%
3) Make in India projects have an increase of exports to by 30% Vision 2023.
4) The proposed new Automobiles Industries and other Industries in the Region of Chennai Industrial Corridor
5) The Ministry of Shipping Classified the Tamil Nadu Coast as Category – 1 for Export and Import

CONCLUSION

This dry port means inland freight terminals directly connected to one or more seaports in Chennai to reduce high -Traffic of Container transhipment . The study of this paper reveals that to provide a optimization of problems arising in sea port to be solved by introduction of dry port. Dry Port concept on freight transportation process ,identifying and classifying the optimization of operational system with standardisation procedure in Customs. Through tactical planning on optimal schedule of Shuttle services cargo movement from dry port with cost reduction and without time delay . The location of Dry port should be within the radius of 50km from Chennai port will be ideal Industrial Corridor. Selection of Dry port location to be linked the hinterland with rail & Road Connectivity and proper planning & computational Network system with high level Connectivity will reduce the cost and time to the end users

REFERENCES

Anon (2008). "Maersk sells Roadways". *World Cargo News - Inland / Intermodal News*, December 2008, p.16.

E.Nishimura, A. Imai , G. K Johnson S.Papadimitriou (2009). "Container Storage and transshipment marine terminals"Transportation Rsarch Part E 45 771-786,

P.Leveque V.Rose "Dry Port Concept for seaport inland access with intermodal solutions "Master thesis .Department of Logistics and Transportation, Chalmers University of Technology .2002.

Ingram, R. A. H. (1992). *The Development of Inland Clearance Depots, 1952-1992*-International Cargo Handling Coordination Association (ICHCA)-40th Anniversary Review. pp 85-87.

J Wie A.Sun ,J Zhuang, "*The selection of Dry port locations with the method of fuzzy in Q Leo Advances in wireless networks and information systems "LNEE 72 265-273 2010.*

Z.Chang T.E.Notterdom "*Location analysis of Dry port using Fuzzy -C – Means Clustering Case Study of the port of Dalian " WCTR 2012.*

Macdiarmid, K. J. and J. D. C. Chambers (1978). *Inland Ports-The UK Containerbase System Containers-Their Handling and Transport*, National Ports Council .pp 295-(15). Nigerian Shippers' Council (2008). http://www.shipperscouncil.com/nsc/portal/services/ support.html.

UNCTAD (1991). *Handbook on the Management and Operation of Dry Ports*, Geneva, RDP/LDC/7, pp. 16-18, 59-61.

DOI: 10.9756/INT-JECSE/V14I3.494