

A STUDY OF OPERATION IN COASTAL LOGISTICS PRE & POST COVID-19 AT XPRESS MARINE

Submitted in partial fulfillment of the requirements for the award of
Master of Business Administration

by

RIXON RAJA R
Register No. 39410253



SCHOOL OF BUSINESS ADMINISTRATION

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

**Accredited with Grade “A” by NAAC | 12B Status by UGC | Approved by AICTE
JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600 119**

APRIL – 2021



XPRESS MARINE SHIPPING SERVICES PVT LTD

TO WHOMSOEVER IT MAY CONCERN

This is to certify that R.RIXON RAJA (Reg No: 39410253) MBA Student of Sathyabama Institute of Science and Technology has completed the Internship starting from 23rd December 2020 to 30th March 2021.

With Regards,

For Xpress Marine Shipping Services Pvt Ltd


DIRECTOR



SATHYABAMA

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Accredited with "A" grade by NAAC | 12B Status by UGC | Approved by AICTE
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai – 600 119
www.sathyabama.ac.in

SCHOOL OF BUSINESS ADMINISTRATION

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **RIXON RAJA R 39410253** who carried out the project entitled "**A STUDY OF OPERATION IN COASTAL LOGISTICS PRE & POST COVID-19 AT XPRESS MARINE**" under my supervision from January 2021 to March 2021.

Dr. DHIVYA SATHISH
Internal Guide

R.DEEPAK
External Guide

Dr. BHUVANESWARI.G.
Dean – School of Business Administration

Submitted for Viva voce Examination held on _____

Internal Examiner

External Examiner

DECLARATION

I **RIXON RAJA R 39410253** hereby declare that the Project Report entitled “**A study of operation in coastal logistics pre & post covid-19 at xpress marine** ” done by me under the guidance of **Dr.Dhivya Sathish Sathyabama Institute Of Science And Technology, Chennai** is submitted in partial fulfillment of the requirements for the award of Master of Business Administration degree.

DATE:

PLACE:

RIXON RAJA R

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RIXON RAJA R

ABSTRACT

The purpose of this study of operation in coastal logistics pre & post covid-19 at Xpress Marine will help us to understand the needs & wants of the customers towards the logistics operations and port operations . The study could provide appropriate and timely information about the position of preference level of customers. As the objectives of this study is to analyse the pre and post covid-19 situation in Xpress Marine, to analyze the performance of the ports process and strategies ,to analyze the problem they faced in the harbors to suggest some measures to overcome the problem they faced. For this purpose, 130 respondents were selected from Xpress Marine and obtained the various responses based on the questionnaire method.

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CHAPTER 1

1.1 INTRODUCTION

India has a long coastline of 5,560 Km ., having access to the sea on three sides with 11 major and 168 minor/intermediate ports. Major ports are directly under the administrative control of Central Government while minor/intermediate ports are managed and administered by the respective maritime State Governments. It is a well known fact that the shipping has always been regarded as an important transport sector of national activities in all maritime countries, and it is well suited for transportation of bulk cargoes at low cost. Coastal Shipping, as a complimentary mode of transport is not only an economic necessity but also a valuable asset in times of emergency. With the continuous development of port logistics service supply chain information management it is necessary to carry out intelligent management and retrieval of port logistics service supply chain information and improve the level of port logistics service supply chain information management to promote the continuous improvement of the service and management ability of port logistics service supply chain and to carry out port logistics service supply chain and to carry out port logistics service supply chain information management under the background of network has become an important development content of port logistics service supply chain information construction. The intelligent management system of port logistics service supply chain information is constructed , and the optimization development of port logistics service supply chain information management is realized by combining manual management and data base management mode. Improve the efficiency of port logistics service supply chain information management , reduce the cost of port logistics service supply chain management.

1.2 INDUSTRY PROFILE

India has 12 major ports and around 200 non-major ports. In FY20, major ports in India handled 704.82 million tonnes (MT) of cargo traffic, implying a CAGR of 2.74% during FY16–FY20. Cargo traffic at non-major ports reached 447.21 MT in FY20 (till December 2019). Since ports handle almost 95% of the trade volumes in India, the rising trade has contributed significantly to country's cargo traffic. The major ports had a capacity of 1,514.09 MT per annum (MTPA) by FY19P. Given the positive outlook, proposed investment in major ports is expected to total US\$ 18.6 billion by 2020, while those in non-major ports will be around US\$ 28.5 billion. Turnaround time at major ports in India has decreased at a rapid pace from 82.32 hours in FY17 to 64.69 hours in FY20 (till September 2019). India's merchandise export decreased 4.78% y-o-y to reach US\$ 314.31 billion in FY20. In November 2019, the first ever movement of container cargo on Brahmaputra (National Waterway -2) focused on improving the connectivity to North Eastern Region (NER). As of November 2019, projects worth Rs. 13,308.41 crore (US\$ 1.90 billion) were awarded on upgradation of major ports. The Ministry of Shipping has sanctioned a sum of US\$ 1.49 million to Gujarat Maritime Board for capacity building and safety training of workers involved in ship recycling activities under Sagarmala. The Government of India has finalized master plans for 142 capacity expansion projects worth Rs. 91,434 crore (US\$ 14.19 billion) under the Sagarmala programme. Approximately, 10,000 jobs were created through projects initiated under Sagarmala over the last three years. In August 2019, India became the first country in the world to issue Biometric Seafarer Identity Document (BSID), capturing the facial bio-metric data of seafarers. The Government of India has allowed Foreign Direct Investment (FDI) of up to 100% under the automatic route for projects related to the construction and maintenance of ports and harbours. Ports received a cumulative FDI of US\$ 1.63 billion between April 2000 and June 2020. A 10-year tax holiday is extended to enterprises engaged in the business of developing, maintaining, and operating ports, inland waterways, and inland ports. The Government has also initiated National Maritime Development Programme (NMDP), an initiative to develop the maritime sector with a planned outlay of US\$ 11.8 billion.

In Union Budget 2020-21, the Ministry of Shipping has been allocated Rs. 1,800 crore (US\$ 257.22 million). The Government had undertaken 55 rail projects worth Rs. 45,883.2 crore (US\$ 6.57 billion) and 15 road projects of Rs. 2,899 crore (US\$ 0.41 billion) for the enhancement of port connectivity at various major and minor ports in 2019. Government plans to replace old Lighthouse Act, 1927, with Aids to Navigation Bill, 2020, and incorporate global best practices, technological developments, and India's International obligations in the field of Aids to Marine Navigation. In October 2020, the Ministry of Shipping announced plans to develop a National Logistics Portal (Marine) with end-to-end logistics solutions to help exporters, importers and service providers. In August 2020, the government announced its plan to invest Rs. 10,000 crore (US\$ 1.4 billion) to build transshipment port at the Great Nicobar Island in the Bay of Bengal to provide shippers an alternative ports in the region. The Transshipment port will enable big ships to anchor and raise India's share in maritime trade due to its proximity to the East–West international shipping route. On July 16, 2020, the first trial container ship was flagged off from Kolkata to Agartala through Chattogram Port of Bangladesh. It will provide an alternate and shorter route to connect the Northeast region through Bangladesh and open doors of new opportunities for both the countries.

1.3 COMPANY PROFILE

Xpress Marine Shipping Services Private Limited is a Private incorporated on 22 June 2015. It is classified as Non-govt Company and is registered at Registrar of Companies, Chennai. Its authorized share capital is Rs. 100,000 and its paid up capital is Rs. 100,000. It is involved in Sea and coastal water transport Xpress Marine Shipping Services Private Limited's Annual General Meeting (AGM) was last held on 30 September 2019 and as per records from Ministry of Corporate Affairs (MCA), its balance sheet was last filed on 31 March 2019. **XPRESS MARINE SHIPPING SERVICES PRIVATE LIMITED** is categorized under Company limited by Shares and Private offering Transport, storage and Communications as its principal business activity. Currently, it is in an active status, owning a Corporate Identification Number U61100TN2015PTC101051 and a registration number 101051. The company is headed by two directors and it was incorporated on **Jun 22, 2015**. It is classified as a Non-govt company, registered with the RoC-Chennai. **XPRESS MARINE SHIPPING SERVICES PRIVATE LIMITED's** Annual General Meeting (AGM) was lately held on Sep 30, 2019, and as per records from the Ministry of Corporate Affairs (MCA), its balance sheet was last filed on Mar 31, 2019, under the Registration of Companies at RoC-Chennai. Its legalized share capital is 1,00,000 and its paid-up capital is 1,00,000.

1.4 NEED FOR THE STUDY

In this present scenario the movement of goods have increased drastically in the coastal department .To analyse the growth and changes of the operations carried out in a particular coastal logistics company. Especially in this current Covid-19 situation .In this study we are going to discuss about the movement and operations carried out in department of coastal logistics.

1.5 SCOPE AND SIGNIFICANCE OF THE STUDY

The scope and importance of this study is to find the feasible way and limit complications in the field of coastal logistics. This study helps to make the supply chain in a simple manner. In this millennium there is a employees choice. Employees are more aware than ever before and have many options to choose from. Thereby the study is to find out reason for employees preference and satisfaction towards various operation carried out in coastal logistics.

1.6 OBJECTIVES OF THE STUDY

The main purpose of this project is to find and analyse the response towards covid situations faced by Xpress Marine.

PRIMARY OBJECTIVE:

To analyze pre & post covid 19 situation in Xpress Marine

SECONDARY OBJECTIVE:

- To analyze the performance of the ports process and strategies.
- To analyze the problem they faced in the harbor's.
- To suggest some measures to overcome the problem they faced.

1.7 LIMITATIONS OF THE STUDY:

- The study was conducted only in Chennai.
- The sample collected has been restricted to the 130 respondents only.
- The bias in sample could not be controlled because staffs attitude differ from person to person.
- The study is limited in Chennai only, it may not be generalized.

CHAPTER 2

REVIEW OF LITERATURE:

KAMBLE,S SACHIN ,RAOOT, D ARUN ,KHANAPURI,B VIVEK (2010) states that the age of globalisation, seaports play a vital role in connecting national supply chains to the global marketplace. Improving port operations has become a priority for many countries. One of the ways to achieve this objective is evaluating the present efficiency as per the parameters laid down for port industry. This paper measures the efficiency of the major Indian seaports using data envelopment analysis on selected input and output variables. The input variables included – storage facilities, number of berths and number of cargo handling equipment's. The two output variables included were average total turnaround time and average output per ship berth day. Six out of 12 ports were identified as efficient ports. Further, an attempt is made to identify various areas for improving the port efficiency based on interviews with port managers from a selected port in India, where the researchers had an opportunity to carry a research project. The interviews were based on a series of qualitative discussions pertaining to the efficiency of ports with the port managers. The study can thus form the baseline on which further adaptation can be made to suit their specific needs.

ADOLF K.Y. NG AND GIRISH GUJAR (2009) states by investigating dry ports within two industrial clusters in Northern India, this paper investigates the locational characteristics of distribution centres in developing economies. Analytical results indicate that the spatial dynamics of dry ports in developing economies are different from Western, advanced economies due to geographical diversifications, the different paces of regional development and local practices. This paper also suggests that dry ports in developing economies are more cluster (rather than supply chain) oriented.

DR. T. RAJASEKAR , DR. MALABIKA DEO (2014) states In this paper, an attempt has been made to measure the efficiency difference between input and output oriented Data Envelopment Analysis (DEA) models for major ports in India over the period of 1993 - 2013. It was assumed that there is no difference between the efficiency of ports based on its orientation i.e. either input oriented or output oriented. Based on the empirical results, the operational efficiency of the ports like JNPT, Kandla, Mormugao and Ennore was observed as efficient ports in both the orientation. Thus can be conclude that there is no difference in efficiency identification of Decision Making Units (DMUs). The results also indicates that steps to be taken to strengthen the operation of inefficient ports, more specifically to upgrade the infrastructure of the ports, some ports need technological improvement. However the caution should be taken while interpreting the efficient ports like JNPT, Kandla, Mormugao and Tuticorin, they may be better in comparison to the other ports in India but may not be the same, when compared with world ports. This should strive for still better operational to be at par with efficient ports in rest parts of the world.

RAJASEKAR T,ASHRAF P SANIA, DEO P MALABIKA (2014) states the present research work examines the operational efficiency of select major ports in India over the period of time 1993 to 2011 through data envelopment analysis. Hypothesis tested in this study is, size does not determine port efficiency. Based on the results it is found that both bigger ports i.e. Mormugao, Jawaharlal Nehru Port Trust and smaller ports Ennore, Tuticorin were proved to have efficient port operations all through. Through the result of super efficiency analysis, the study found that JNPT port rated as number one super-efficient port among the selected major ports in India.

SANTU KUMAR BOSE (2001) states this paper attempts to analyse the performance of major ports in India taking into account the absolute cargo handled by them during 1951-52 to 1992-93. A particular focus of the study is the Calcutta-Haldia Port in the same period, with a view to determining the reasons for its deteriorating performance.

H. ABDUL JAFFAR ALI, M. TAMILSELVI, A. SOBAN AKRAM, M.L. KALEEM ARSHAN, V. SIVAKUMAR (2015) states ascidians belonging to the sub-phylum Urochordata are used as potential model organisms in various parts of the world for biosorption of metals. The sedentary nature, filter feeding habits, presence of vanadocytes and the absence of kidneys cause them to accumulate metals. The present study was aimed to compare biosorption of metals such as cadmium, copper, lead, mercury and vanadium in test and mantle body of solitary ascidian *Phallusia nigra* between two ecologically significant stations such as Thoothukudi (Station 1) and Vizhinjam (Station 2) ports of India. Monthly samplings of water and *P. nigra* were done for a period of one year from September 2010 to August 2011 and subjected to analysis of metal accumulation. The average metal concentrations except mercury in the Thoothukudi water were found to be higher of comparable magnitudes than the Vizhinjam water. One-way ANOVA showed significant differences between the stations. A comparison of average metal concentrations in the test and mantle body of *P. nigra* between two stations showed that the enrichment of V, Cd, Pb, Cu and Hg in the Thoothukudi samples may be due to high bioaccumulation factors of these elements as compared to other species of ascidians. The bioaccumulation factors were in the order of $V > Pb > Cd > Cu > Hg$ for the test and mantle body in stations 1 and 2. Application of one-way ANOVA for the concentration of these metals between test and mantle body showed significant differences in both stations. Similarly, ANOVA for biosorption of these trace metals by *P. nigra* showed significant difference between stations. Metal concentrations recorded in this ascidian could effectively be used as good reference material for monitoring metal contamination in Indian sea waters.

DR. J. RENGAMANI , V. VENKATRAMAN (2015) states India has 13 major ports and 176 non-major ones. The major ports carry about 3/4th of the total traffic. Despite adequate capacity and handling facilities the average turnaround time of major Indian ports is less than 4 days which is very high compared to the average turnaround time of about 10 hrs in Hong Kong. This undermines the competitiveness of Indian ports. Since the ports are not adequately linked to the Hinterland, the evacuation of Cargo is slow leading to congestion. To this end, all ports trust have set up groups with

representatives from the National Highway Authority of India(NHAI), Railways and State Governments to prepare comprehensive plans aimed at improving road-rail connectivity of ports. The NHAI has taken up port connectivity as major component of the National Highways Development Project. Traditionally, most ports in the world are owned by the Public Sectors. In the recent years privatization of ports facilities and services are gaining momentum. In India an enabling policy framework has been put in place by the Government as a step towards this direction. Depending on the nature of the facilities/service, private operators can enter into the service contract, the management contract a concession agreement to operate port services. Areas that have been opened up to the private sectors on BOT basis include construction of CARGO handling berths and dry docks, container terminals and warehousing facilities and ship repair facilities. The shipping services in India are patterned similar to the global shipping services, namely, tramps and liners. The types of ships engaged in India's overseas trade include dry cargo liners, cellular container ships, dry cargo bulk carriers, ore/oil/bulk carriers, oil tankers (product carriers), passenger cum-cargo vessels, acid carriers, timer carriers, LPG carriers, etc. The shipping industry also caters to the requirements of coastal trade and offshore supply vessels (OSVs) for ONGC and GAIL. The aim of the study is to measure the performance of major ports of India.

ATUL DESKMU KH (2005) states this paper has tried to study and compare the efficiency of Major Ports in India. It also tries to make the comparison of Indian Ports to that of the Ports like Singapore and other developed countries ports. Various parameters are taken into consideration while comparing the ports. To derive the conclusion from the comparison of major ports in India, it can be said that JNPT is the only port that has shown positive efficiency for the past five to six years. The cost of handling cargo per tonne has reduced at JNPT port while other ports has shown a continuous rise. Though the total cargo handled by JNPT is not the highest as Vishakhapatnam, Mumbai or Kandla, the traffic handled has shown a continuous rise. About 50% of the Container cargo in the country is handled by JNPT.

T RAJASEKAR & MALABIKA DEO (2014) states in this paper, an attempt has been made to measure the operational efficiency of major Indian ports during the period 1993-2011 by employing Data Envelopment Analysis (DEA) models. It was hypothesized that size is not a determinant factor of port efficiency. Based on the empirical results, the operational efficiency of both the bigger ports like JNPT, Mormugao and Kandla as well as of the smaller ports like, Ennore and Tuticorin was observed. Hence, the general notion that size contributes to the operational advantage gets negated as it is seen that efficiency does not depend on size. Further, about 44.13% of the ports were found exhibiting increasing returns to scale, which indicates that these ports need to increase their scale of operations via expansion or internal growth and by building alliances, while 11.73% of ports were found exhibiting decreasing returns to scale, indicating that these ports should decrease their scale of operations by giving up some of the terminal assets and operational functions to other specialized private entities in order to improve their overall efficiency.

RAGHURAM, G.SHUKLA, NIRAJA (2014) states PPP mode of investment in Indian ports has made a significant headway and is preferred for investments today. The 12 major ports and about 200 minor ports along the 7,500 km coastline of the country have together traded about 935 mt of cargo in 2012-13. The traffic is growing each year. The share of non major ports is rising and has reached 42% in year 2012-13. The PPP mode was more popular at non major ports controlled by the State Government, than major ports controlled by Central Government. During the XI Plan, the overall investment in the port sector was significantly lower than planned. It has had an impact on the efficacy of PPP investment in this sector. This paper analyses the issues behind this, to evolve the way forward. The issues which the port authorities or private parties have faced so far should be of interest to stakeholders wanting to leverage the PPP mode of investment. While there are arguments for and against this mode, the overall outlook for PPPs has been positive in terms of bringing about competition, fairness in operations, efficiency and quality of service.

PAUL MURPHY, DOUGLAS DALENBERG AND JAMES DALEY (2012) states transportation Journal is published quarterly for the American Society of Transportation and Logistics to disseminate research findings and original writings on transportation, logistics, and related fields. Book reviews are included. Articles cover such areas as air transport, international transport, logistics/physical/distribution/supply chain management, management information systems and computer applications, motor transport, rail transport, regulation/law, traffic and transport management, transport policy, and water transport.

YANLIANG WANG AND WEIJIA DU (2009) states the boom in cross border trade has intensified competition among ports. To gain competitive advantage, many ports have introduced supply chain management to port operations, giving birth to the port supply chain (PSC). Thus, it is very meaningful to evaluate the overall operation of the PSC, identify PSC problems, and put forward effective countermeasures. In this paper, an index system is set up for PSC diagnosis, and a PSC diagnosis model is constructed, drawing on the supply chain operations reference (SCOR) model and the existing studies. The index system contains four indices, reliability, r , agility, and cost, while the model covers several steps, like index weighing, benchmark setting, evaluation, and result analysis. The proposed model was verified through an example analysis. The research findings shed new light on PSC operation and management.

ANANTHAPADMANABHAN NARASIMHAN AND UDATTA S. PALEKAR (2004) states the problem of minimizing the time taken to load the containers from the container stack yard onto the ship is called the transtainer routing problem. We first do a theoretical investigation of the problem to understand the structural properties of the problem. We then use these results to prove that the problem is NP-Complete. The problem is then formulated as an integer program. A branch-and-bound based enumerative method is developed to obtain an exact solution to the problem. An algorithm to solve the matching problem on a line at the root node of the branch-and-bound tree is developed. Several lower bounds to prune the size of the tree are also developed. A result which states that there cannot exist a polynomial time heuristic with a bounded worst case unless $P = NP$ is proved. Based on this result, an enumerative heuristic with a worst-case performance

ratio of 1.5 is designed. Computational tests on randomly generated problems are conducted to evaluate the exact and heuristic algorithms.

DANIEL TODD AND ZHANG LEI (2010) states five readily discernible seminal events have moulded port-hinterland relations in Manchuria, and accordingly, have dictated the scale and scope of port operations. They are, in chronological order, the Treaty of Tientsin and the attendant opening of Newchang (Yingkou) to foreign trade in 1862, the lease to Russia in 1898 of the tip of the Liaodong peninsula and the founding thereon of the port of Dalny (Dalian), the seizure of Dalian by Japan in 1905, the closure of Manchuria's ports to foreign trade with the accession of communist rule in China in 1949, and the reversal of that policy in no uncertain terms during the 1980s consequent upon China's conversion to "open port" thinking. Scarcely acknowledged because less perceptible, changes in the technology governing the characteristics and employment of ships have been equally critical in regulating port operations in this part of northern China. In particular, the twin driving forces leading to ship enlargement and specialisation have induced fundamental reorganisation of both waterfront and inland transfer facilities. These adaptations, abrupt and gradual, politically-inspired or technologically-motivated, are grist to the mill of this study.

PAUL R. MURPHY AND JAMES M. DALEY (2009) states transportation Journal is published quarterly for the American Society of Transportation and Logistics to disseminate research findings and original writings on transportation, logistics, and related fields. Book reviews are included. Articles cover such areas as air transport, international transport, logistics/physical/distribution/supply chain management, management information systems and computer applications, motor transport, rail transport, regulation/law, traffic and transport management, transport policy, and water transport.

YINGIGBA CHIOMA AKINYEMI (2006) states this paper examines the impact of restructuring and privatisation on the efficiency of Nigerian ports. The main objective of the reform was to increase efficiency in port operation, decrease cost of port services to stakeholders, decrease cost to the government for the support of the port sector and to attract private sector participation. The study compared the performance of the ports before and after the reforms. Stochastic frontier model of Cobb-Douglas and Translog

production function was used to determine whether the efficiency of the ports has improved after the reforms. Results of the analysis indicate that Nigeria's ports achieved an average annual efficiency level between 59 and 75 % and there was improvement in cargo throughput, number of vessels, berth occupancy and ship turn-around time after the reform. The port specific measures indicate consistent rise in technical efficiency throughout the period. However, in spite of the efficiency gains, there are some issues which are affecting the performance of the ports: high port charges, delay in cargo clearance, multiple taxation and development of intermodal transport. It is therefore imperative for the government to assume its regulatory role in the industry.

INAYAT KALIM AND AREEJA SYED (2011) states today maritime economy recognizes the seas and oceans as the main driving force for the sustainable economic growth across the globe. Pakistan with its unique geographic location is blessed with approximately 1050 km long coastline and the Exclusive Economic Zone (EEZ) covering an area of about 240,000 sq km. In a brief history of globalization, seaborne trade and sea ports have made significant contributions towards socioeconomic development, thereby strengthening economic ties among states of various regions. Similarly, Pakistan's Gwadar port emerges as an ideal hub port in the region due to its unique strategic placement to attract trade from Central Asia, Afghanistan, west China and other countries due to its proximity to the Strait of Hormuz (SoH), which is the main shipping route, and connects the Persian Gulf with the Gulf of Oman and the Arabian Sea. Today, Gwadar's geostrategic positioning enables it to monitor and control the oil trade routes and Sea Lines of Communications (SLOCs) between the regions of South Asia, West Asia, Africa and Central Asia. Gwadar's deep-sea port characteristic is one of the rare features which equips it to expand its operation to the 88 berths and capacity to anchor gigantic vessels from 100,000 DWT to 200,000 DWT. The working capacity of the Gwadar Port is equal to the Persian Gulf ports. This paper attempts to determine the potential and strength of the Gwadar Port as a growth catalyst for Pakistan as the country's international trade is directed through the sea.

DOUGLAS HALES, JASMINE SIU LEE LAM AND YOUNG-TAE CHANG (2009) states due to weakening demand since the 2008 global recession, ports have had to reconsider how to compete differently to attract new business and new investors. Extant literature mainly focuses on either customer competitiveness or investor competitiveness. This study develops a new model of port competitiveness that simultaneously considers the effect of port strategy on customers and investors. This model is referred to as the “balanced theory of port competitiveness.” An analytical hierarchy process model builds on 10 factors that customers and investors consider important, and it is tested on 12 global seaports. The results show that port managers should consider the effect of their decisions among the factors because failure to do so can improve one factor of competitiveness while harming another. This study tests a theory that explains the behaviour of port managers and provides them with a practical guide to evaluate the effect of their decisions on customers and investors.

YOUNG-TAE CHANG AND WAYNE K. TALLEY (2015) states this article examines such port competitiveness from the perspective of port efficiency and supply chains. Specifically, studies are examined that investigate port competitiveness from the traditional perspective and from the chain perspective. In doing so, methodological problems of the literature in investigating port competitiveness are deduced.

MUHAMMAD ABBAS HASSAN (2013) states the Indian Ocean is the world’s third-largest body of water and has become an area of growing competition between China and India. As the economy, power and interests of both the countries increase, this competition endanger the stability of the region, which is significant for global maritime trade flows. This paper aims to give an overview of India’s ambitions as well as China’s growing strategic interests in the Indian Ocean Region (IOR). Based on their growing interests, the study will highlight the implications of this competition for Pakistan. It will also try to present a way forward, which Pakistan must adopt to avoid its interests being compromised.

YUNHUA LI, QIANLI DONG AND SHIWEI SUN (2007) states dry ports have become integral to the trade facilitation in China in the last decade. They are playing important roles in facilitating transportation for international trade and further stimulating economic

development in China's central and western inland areas. However, without a clear strategic direction, the institutional and regulatory framework for dry port development is shown to be at an immature and disordered state. This paper summarizes the current status of dry port development in China. Based on this, the study proposes a new dry port development strategic layout. We conclude that the dry port development strategy in China should be shifted from the pursuit of scale to efficiency. We also point out that, in order to avoid repetitive or blind construction, the dry ports' construction plan should be integrated into the layout of the port construction planning and comprehensive transportation system planning. The governors of dry ports should have a better understanding about the trend of the dry ports development in the world. For a long-term interest, we need to absorb investment through different ways to alleviate the capital pressure. By strengthening the cooperation relationships among the local governments, customs, inspection and quarantine departments, and the logistics enterprises, an innovative service mode should be built to create the value for the enterprises. Our study could shed light on the practice of port enterprises to improve quality service for winning more customers' trust and satisfaction. The strategic directions of dry port in China are also well discussed in our study.

V.G. VENKATESH, ABRAHAM ZHANG, ERIC DEAKINS, VENKATESH MANI AND YANGYAN SHI (2017) states abstract Despite the growing interest in supply chain integration and port performance in the maritime literature, there is a lack of detailed studies into the barriers to integration in port-centric logistics. This study explores the barriers to port-centric supply chain integration from an emerging economy and multistakeholder perspective by using the DEMATEL (Decision Making-Trial and Evaluation Laboratory) analysis technique. The findings indicate that institutional requirements, lack of awareness by stakeholders, and port-centric supply chain integration all significantly impact supply chain projects that have been designed to offer maximum value to customers at a low cost. Other crucial barriers include the absence of benchmarking standards and lack of an innovation culture. The policy and managerial implications are explained.

J G R MONTEIRO (2008) states ports have played an important role in the economic development of India, and its vast hinterland, and are an important infrastructural resource for the country's trade. While the financial performance of the ports is improving marginally in value terms, problems of productivity and efficiency affect their operations. In this paper, we measure productivity and efficiency of the 12 major ports of India by making use of Data Envelopment Analysis. The Malmquist Productivity Indices, computed for the sample period 2001-08, differ substantially from port to port. While there has been a significant improvement in the performance of major ports since 1991, much more needs to be done in terms of bringing in modern technology in traffic handling.

YOEL GUZANSKY AND GIL HURVITZ (2015) states the Institute for National Security Studies launches and engages in innovative, relevant, high-quality research that shapes the public discourse of issues on Israel's national security agenda, and provides policy analysis and recommendations to decision makers, public leaders, and the strategic community, both in Israel and abroad. As part of its mission, it is committed to encourage new ways of thinking and expand the traditional contours of establishment analysis. INSS researchers are guided by the four core values of professionalism, relevance, intellectual independence, and teamwork. They are engaged in exploring the most pressing issues of Israel's national security, and contribute through creative and innovative thinking to national security policymaking.

ANKUSH GUHA (2009) states during the last four decades, when one spoke of Ports, particularly deep sea Ports, certain major players always stood out, though one may argue, regarding the stand-out Ports of the world, that they still are competing only among themselves. The larger Ports are Yokohama (Japan), New York (USA), Rotterdam (Netherlands), Antwerp (Belgium), Singapore, Hong Kong, Pusan and Shanghai (China). Today, no Ports around the globe can enjoy a monopoly power over their hinterlands, as cargoes/goods originating from or destined to these numerous locations do not have to be shipped through them. On the other hand, choices have become the order of the day for shipping lines to their Ports of call with the emergence of new Ports and expansion and development of latest Port facilities to meet increasing freight traffic.

JASON MONIOS AND YUHONG WANG (2014) states this paper examines the spatial and institutional characteristics of the emerging trend of inland port development in China. The paper analyses a sample of 18 major inland ports in three geographical clusters, comparing observed issues with similar developments in Europe, the United States and Africa. It highlights the issues of customs clearance and intermodal transport, before an extended discussion on conflicting models of development based on the priorities of inland and port actors. The aim is first to provide a descriptive account of this development, and second to provide tentative explanations for these results by comparing the findings with similar developments in other countries. This task is aided by use of a conceptual framework drawn from the literature, in which port-driven and inland-driven inland ports are contrasted. Thus a supplementary aim of the paper is to develop the conceptual model of directional development in a new geographical context. Findings reveal the need to align development priorities of central and local governments, as well as clarifying the use of subsidies to a number of different inland ports which may potentially split economies of scale through increased competition for an overlapping hinterland. The paper demonstrates that, while in the past China's seaports had less inland penetration compared to more mature systems, emerging trends suggest some similarities to patterns observed in more integrated networks such as Europe and North America.

YANNA YIN, JIAN XU, XIN WEN AND FUJUAN YU (2012) states focusing on the equilibrium and attributes of regional logistics operation, this paper probes into the formation mechanism and evaluation criteria of regional port logistics operation, and synthesizes such three dimensions as time, quantity and structure. Then, a monitoring index system was built for regional port logistics operation based on the three dimensions, and validated through an actual case of regional logistics system. This research not only deepens the understanding of logistics equilibrium theory, but also supports the decision-making in supervision departments of regional logistics operation.

WEI WANG, LI HUANG, JI MA, QU WEI AND ZHAOXIA GUO (2013) states this paper establishes a progressive optimization-based simulation model for the port-channel-anchorage composite system based on two types of navigation rules for optimizing the

number of anchorages. This model determine firstly the value range of the number of anchorages, then find the feasible combinations of the number of anchorages, and finally determine the best combination based on the analysis of comprehensive cost. By taking a large coastal port in China as a case port, this paper presents how to determine the number of anchorages for 300,000-ton berths based on two types of commonly used navigation rules. The case analysis shows that the change of the number of anchor ages dedicated to one vessel type not only has a large direct effect on the number of vessels of this type waiting for anchoring, but also indirectly affect the number of vessels of other types waiting for anchoring. This paper also compares the performance differences of the two navigation rules.

ZHIWEI LI (2015) states this paper aims to explore the development strategies of Beijing-Tianjin-Hebei port cluster. Based on the data of Beijing-Tianjin-Hebei port cluster in 1980~2014, a VAR model was established with such four variables as total handling capacity, import and export, GDP and the employment. Then, the economic relationship between the port cluster and the hinterland was analysed by impulse response, and the four variables were subjected to the Grainger causality test. The results show that the total handling capacity of the port cluster has a positive effect on the import and export, GDP, and employment, but the increase in GDP is not the Granger-cause of the increase in the port cluster throughput. The GDP growth only has a short-term driving effect on the port cluster throughput. The long-term growth of port throughput largely depends on international economy. What is worse, the positive effect of port throughput on hinterland economy is rather limited. The research findings and suggestions provide meaningful reference for the research on port cluster economy.

BO LU, NAM KYU PARK AND YUNFU HUO (2017) states it is of great importance for port managers to know whether they have fully used their existing infrastructures and that output has been maximized given the amount of input. From this perspective, data envelopment analysis (DEA) provides a more appropriate benchmark for the container port. By applying three kinds of DEA models, this study acquires a variety of analytical results about operational efficiency of the worlds' leading container ports. According to efficiency value analysis, this study firstly finds out the reason of inefficiency. Then, it is

followed by identification of the potential areas of improvement for inefficient ports by applying slack variable method. Furthermore, return to scale approach is used to assess whether each port is in a state of increasing, decreasing, or constant return to scale. Finally, by utilization of the sensitivity analysis, this study can identify which input or output variables are more critical to the model, and which one will have more impact on. The results of this study can provide port managers with insights into resource allocation and optimization of the operating performance.

CHAPTER 3

RESEARCH METHODOLOGY

Business research is a systematic enquiry that provides Information to guide business decisions and aimed to solve managerial problems. Business research is of recent origin and it is largely supported by business organizations that hope to achieve competitive advantages. Research methodology is a way to systematically solve the research problems. It may be understood as a science of studying how research is done scientifically. It includes the overall research design, the sampling procedure, data collection method and analysis procedure.

3.1 RESEARCH DESIGN:

The research design stands for advance planning of the method to be adopted for collection the relevant data and the techniques to be used in adopted for collecting the relevant data and the techniques to be used in analysis, keeping the view the objectives of the research and availability time.

In general, research design is the conceptual structure within which research is conducted: it constitutes the blue print for the collection, measurement and analysis of data.

The Research Design undertaken for the study is **Descriptive Research Design**. A study, which wants to portray the characteristics of a group or individuals or situation, is known as **Descriptive study**. It is mostly qualitative in nature.

3.2 SAMPLING TECHNIQUE:

Sampling is the process of selecting the sufficient number of elements from the population (the items selected technically are called as Sampling). **Random sampling** is a way of selecting a **sample** of observations from a population in order to make inferences about the population. For example, exit polls from voters that aim to predict the likely results of an election.

3.3 SOURCES OF DATA:

Well Structured Questionnaires has been prepared for collection of primary data. Most of the questions are consist of multiple choices. The structured Questionnaire method was undertaken. Proper care was taken to frame the Questionnaire in such a manner it should be easily understood in view of educational level of the employees.

3.4 STRUCTURE OF QUESTIONNAIRE:

The structure of questionnaire consists of two parts.

Part A consists of profile of the respondents and part B consists of questions related to objectives.

3.5 SAMPLE SIZE:

Sample size means the number of sampling units selected from the population for investigation. It helps to achieve the objective of research. The sample size taken for the study is 130.

3.6 PERIOD OF STUDY:

The study period is from January 2021 - March 2021.

3.7 ANALYTICAL TOOLS USED:

- Percentage method.
- Chi-square test.
- Correlations.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

4.1 PERCENTAGE ANALYSIS

TABLE 4.1.1: GENDER CLASSIFICATION OF THE RESPONDENTS

S NO	Particulars	No. of Respondents	Percentage
1.	Male	83	63.8
2.	Female	45	34.6
3.	Prefer not to say	2	1.5
	Total	130	100

Source: primary data.

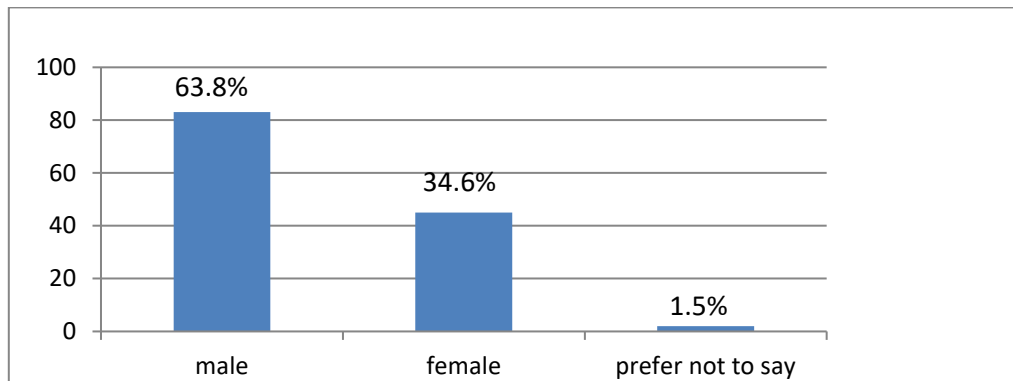


CHART 4.1.1 GENDER CLASSIFICATION OF THE RESPONDENTS

Interpretation

From the above table it is interpreted that the number of male respondents is 63.8%, female respondent is 34.6%. and prefer not to say respondents is 1.5%

Inference

Majority (63.8%) of the respondents are Male.

TABLE 4.1.2

AGE WISE CLASSIFICATION OF RESPONDENTS

S NO	Particulars	No. of Respondents	Percentage
1.	<= 25 Years	52	40
2.	26 - 35 Years	31	23.8
3.	36 - 45 Years	28	21.5
4.	46 - 60 years	12	9.2
5.	Above 60 Years	7	5.4
	Total	130	100

Source: Primary data.

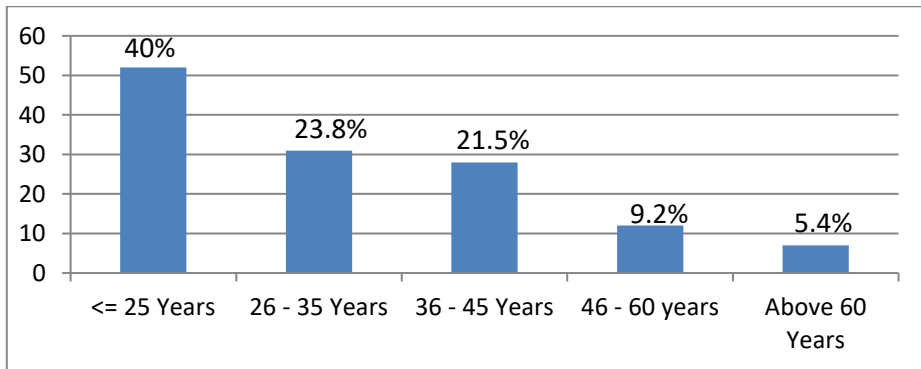


CHART 4.1.2 AGE WISE CLASSIFICATION OF RESPONDENTS

Interpretation

From the above table it is interpreted that the number of respondents between <= 25 Years is 40%, 26 - 35 Years is 23.8%, 36 - 45 Years is 21.5%, 46 - 60 Years is 9.2%, above 60 Years is 5.4%.

Inference

Majority (40%) of the respondents fall in the age category of <= 25 years.

TABLE 4.1.3
MARITAL STATUS OF THE RESPONDENTS

S NO	Particulars	No. of Respondents	Percentage
1	Married	65	50
2	Unmarried	65	50
	Total	130	100

Source: Primary data.

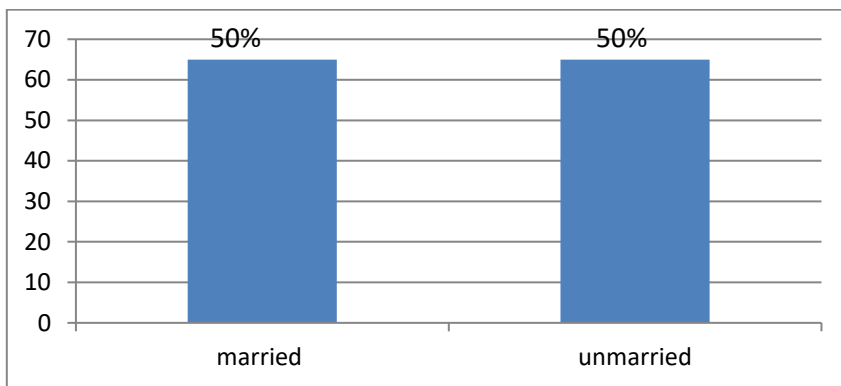


CHART 4.1.3 MARITAL STATUS OF THE RESPONDENTS

Interpretation

From the above table it is interpreted that the number of respondents were 50% in married, 50% in unmarried.

Inference

Both (50%) of the respondents fall in the category of married and (50%) fall in the category of unmarried.

TABLE 4.1.4
INCOME OF THE RESPONDENTS

S NO	Particulars	No. of Respondents	Percentage
1.	<=15,000	15	10
2.	15,000 – 20,000	17	13
3.	20,000 – 30,000	35	28
4.	30,000 –35,000	29	22
5.	Above 35,000	34	27
	Total	130	100

Source: Primary data.

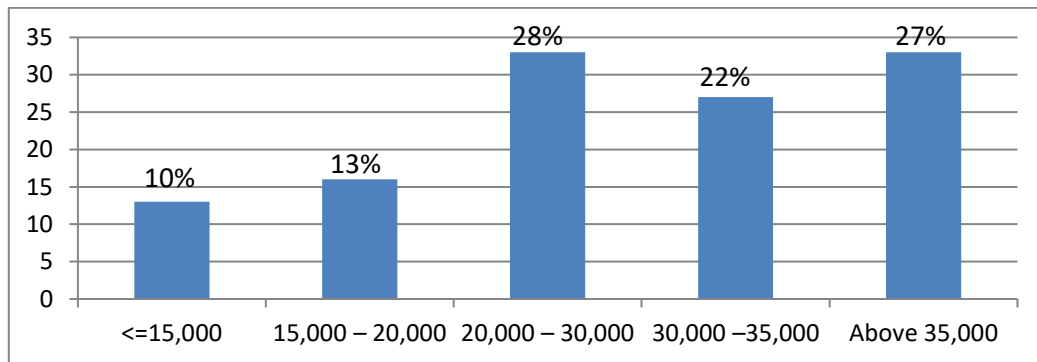


CHART 4.1.4 INCOME OF THE RESPONDENTS

Interpretation

From the above table it is interpreted that the number of respondents in <= 15,000 is 10%, 15,000 - 20,000 is 13%, 20,000 - 30,000 is 28%, 30,000 - 35,000 is 22%, Above 35,000 is 27%.

Inference

Majority (28%) of the respondents have incomes between 20,000-30,000.

TABLE 4.1.5
THE WORKING EXPERIENCE

S NO	Particulars	No. of Respondents	Percentage
1.	0-1 year	26	18.4
2.	1-3 years	52	41.6
3.	4-5 years	28	21.6
4.	More than 5 years	24	18.4
	Total	125	100

Source: Primary data.

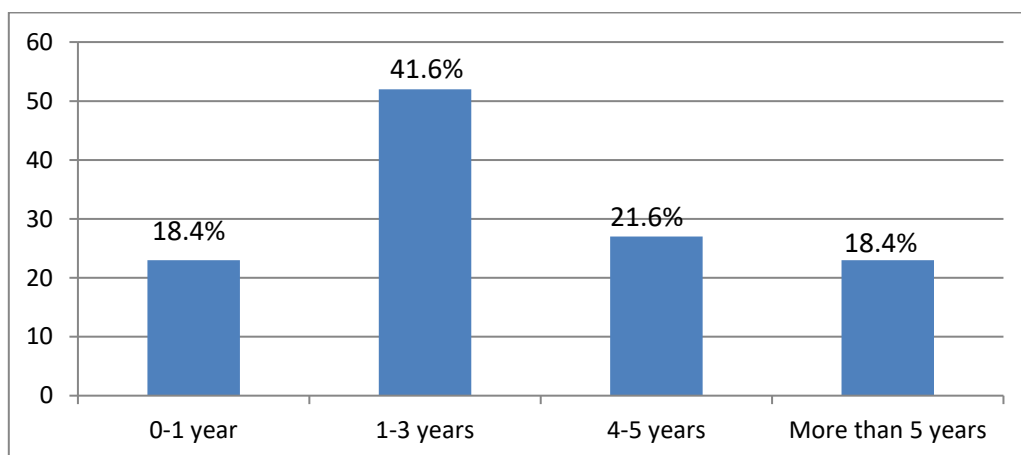


CHART 4.1.5 THE WORKING EXPERIENCE

Interpretation

From the above table it is interpreted that the number of respondents in 0-1 year is 18.4%, 1-3 years is 41.6%, 4-5 years is 21.6%, More than 5 years is 18.4%.

Inference

Majority (41.6%) of the respondents have work experience between 1-3 years.

TABLE 4.1.6

TO ANALYZE TO WHICH DEPARTMENT DO THEY WORK FOR.

S NO	Particulars	No. of Respondents	Percentage
1.	Order processing	18	12.9
2.	Material handling	35	26.6
3.	Inventory control	40	31.5
4.	Warehousing	20	16.1
5.	Transportation	17	12.9
	Total	130	100

Source: Primary data.

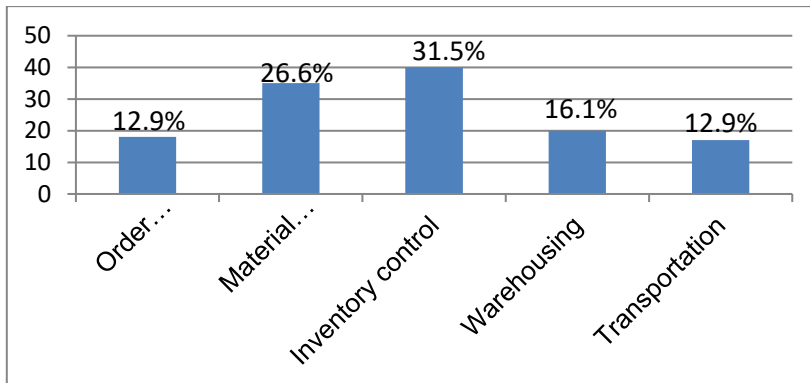


CHART 4.1.6 TO ANALYZE TO WHICH DEPARTMENT DO THEY WORK FOR.

Interpretation

From the above table it is interpreted that the number of respondents in Order processing is 12.9%, Material handling is 26.6%, Inventory control is 31.5%, Warehousing is 16.1%, Transportation is 12.9%.

Inference

Majority (31.5%) of the respondents are from inventory control department.

TABLE 4.1.7 THE COVID-19 PANDEMIC HAS BROUGHT CHANGES IN THE OPERATIONS OF XPRESS MARINE.

S NO	Particulars	No. of Respondents	Percentage
1.	Strongly Agree	37	28.5
2.	Agree	49	37.7
3.	Neutral	41	31.5
4.	Disagree	2	1.5
5.	Strongly Disagree	1	0.8
	Total	130	100

Source: Primary data.

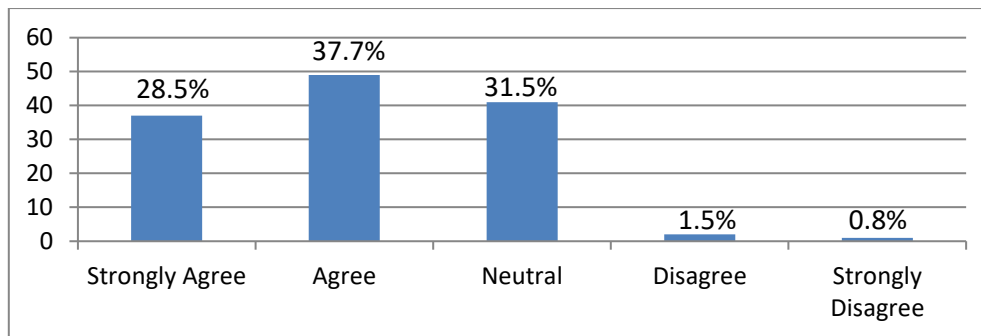


CHART 4.1.7 THE COVID-19 PANDEMIC HAS BROUGHT CHANGES IN THE OPERATIONS OF XPRESS MARINE.

Interpretation

From the above table it is interpreted that the number of respondents in Strongly Agree is 28.5%, Agree is 37.7%, Neutral is 31.5%, Disagree is 1.5%, Strongly Disagree is 0.8%.

Inference

Majority (37.7%) of the respondents have selected agree.

TABLE 4.1.8 DUE TO COVID-19 PANDEMIC, THERE WAS CHANGE IN WORKING HOURS

S NO	Particulars	No. of Respondents	Percentage
1.	Strongly Agree	43	33.1
2.	Agree	42	32.3
3.	Neutral	39	30
4.	Disagree	5	3.8
5.	Strongly Disagree	1	0.8
	Total	130	100

Source: Primary data.

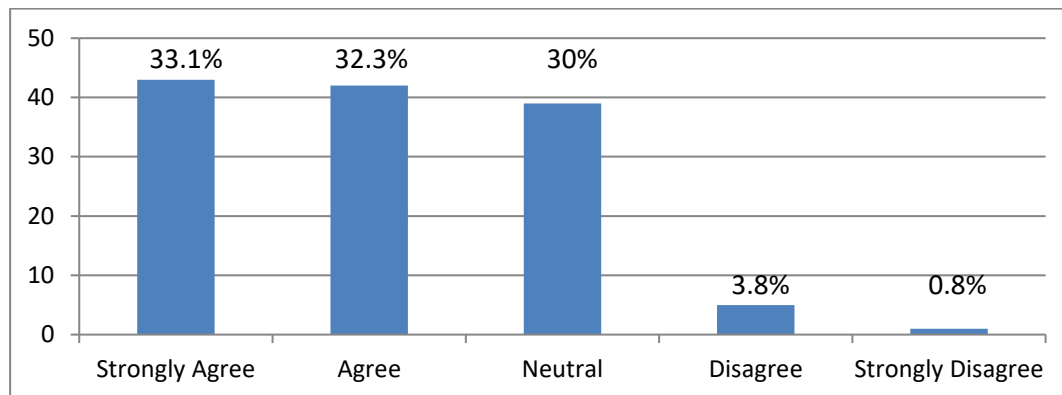


CHART 4.1.8 DUE TO COVID-19 PANDEMIC, THERE WAS CHANGE IN WORKING HOURS

Interpretation

From the above table it is interpreted that the number of respondents in Strongly Agree is 33.1%, Agree is 32.3%, Neutral is 30%, Disagree is 3.8%, Strongly Disagree is 0.8%.

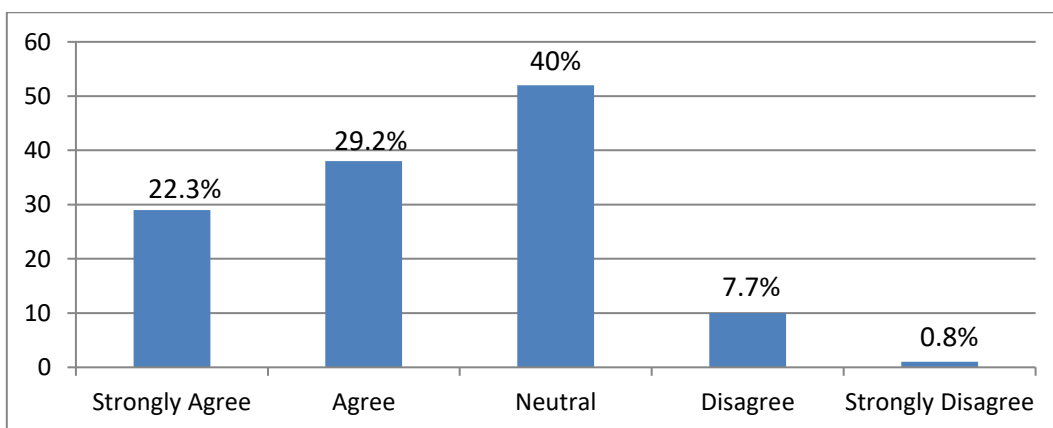
Inference

Majority (33.1%) of the respondents have selected strongly agree.

TABLE 4.1.9**WORKING FROM HOME DURING COVID-19 IS EFFECTIVE.**

S NO	Particulars	No. of Respondents	Percentage
1.	Strongly Agree	29	22.3
2.	Agree	38	29.2
3.	Neutral	52	40
4.	Disagree	10	7.7
5.	Strongly Disagree	1	0.8
	Total	130	100

Source: Primary data.

**CHART 4.1.9 WORKING FROM HOME DURING COVID-19 IS EFFECTIVE.****Interpretation**

From the above table it is interpreted that the number of respondents in Strongly Agree is 22.3%, Agree is 29.2%, Neutral is 40%, Disagree is 7.7%, Strongly Disagree is 0.8%.

Inference

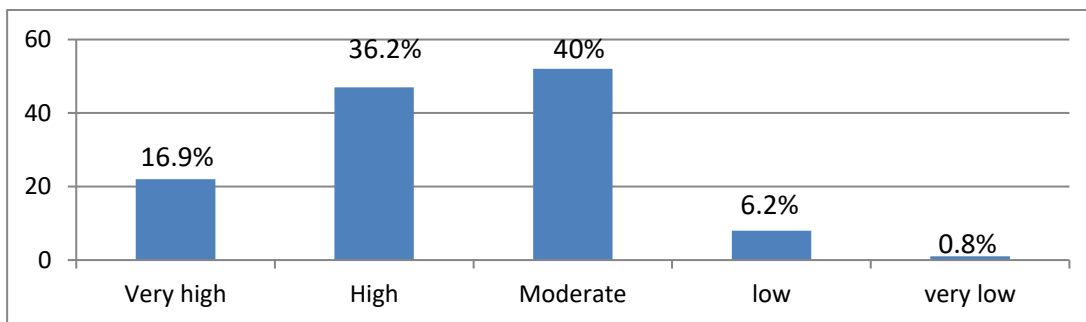
Majority (40%) of the respondents have selected Neutral.

TABLE 4.1.10

**THE BUSINESS GROWTH AND REVENUE GENERATION IN XPRESS MARINE
BEFORE COVID-19 PANDEMIC**

S NO	Particulars	No. of Respondents	Percentage
1.	Very high	22	16.9
2.	High	47	36.2
3.	Moderate	52	40
4.	Low	8	6.2
5.	Very low	1	0.8
	Total	130	100

Source: Primary data.



**CHART 4.1.10 THE BUSINESS GROWTH AND REVENUE GENERATION IN
XPRESS MARINE BEFORE COVID-19 PANDEMIC**

Interpretation

From the above table it is interpreted that the number of respondents in very high is 16.9%, high is 36.2%, moderate is 40%, low is 6.2%, very low is 0.8%.

Inference

Majority (40%) of the respondents have selected moderate.

TABLE 4.1.11

THE PORT OPERATIONS IN XPRESS MARINE ARE SMOOTHLY PROCESSING.

S NO	Particulars	No. of Respondents	Percentage
1.	Strongly Agree	21	16.2
2.	Agree	49	37.7
3.	Neutral	48	36.9
4.	Disagree	8	6.2
5.	Strongly Disagree	4	3.1
	Total	130	100

Source: Primary data.

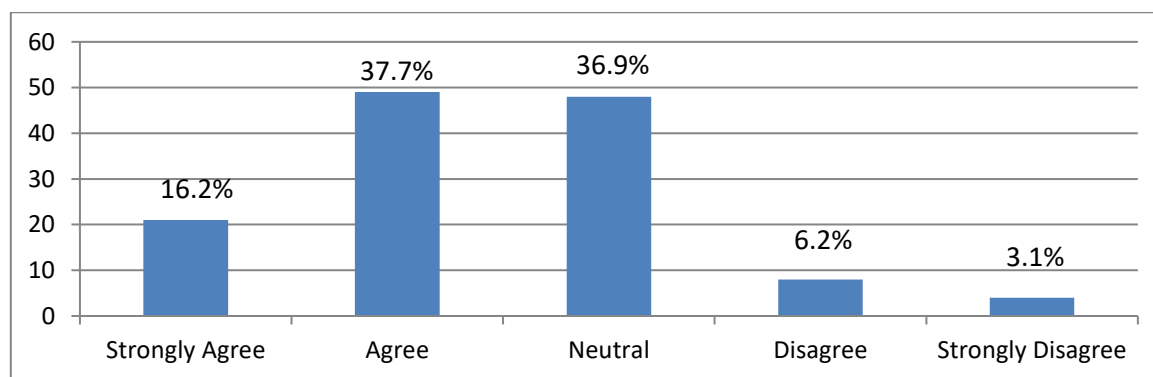


CHART 4.1.11 THE PORT OPERATIONS IN XPRESS MARINE ARE SMOOTHLY PROCESSING.

Interpretation

From the above table it is interpreted that the number of respondents in Strongly Agree is 16.2%, Agree is 37.7%, Neutral is 36.9%, Disagree is 6.2%, Strongly Disagree is 3.1%.

Inference

Majority (36.9%) of the respondents have selected Neutral.

TABLE 4.1.12

THE DOCUMENTAION PROCEDURES ARE SMOOTH IN XPRESS MARINE.

S NO	Particulars	No. of Respondents	Percentage
1.	Strongly Agree	22	16.9
2.	Agree	46	35.4
3.	Neutral	55	42.3
4.	Disagree	4	3.1
5.	Strongly Disagree	3	2.3
	Total	130	100

Source: Primary data.

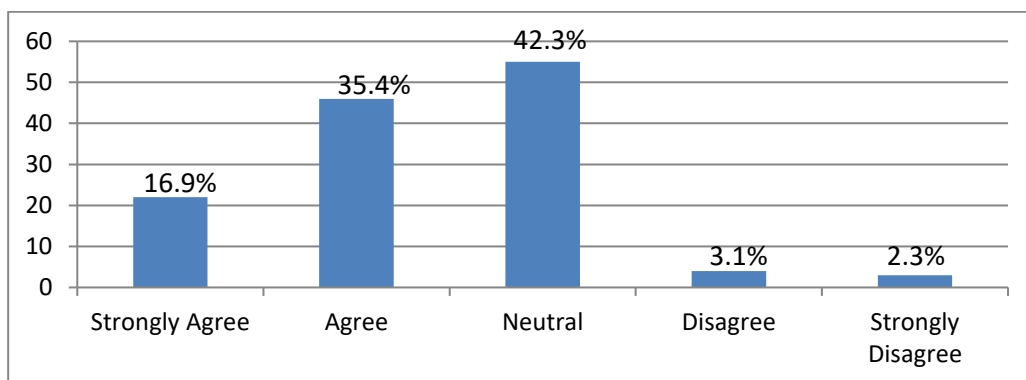


CHART 4.1.12 THE DOCUMENTAION PROCEDURES ARE SMOOTH IN XPRESS MARINE.

Interpretation

From the above table it is interpreted that the number of respondents in Strongly Agree is 16.9%, Agree is 35.4%, Neutral is 42.3%, Disagree is 3.1%, Strongly Disagree is 2.3%.

Inference

Majority (42.3%) of the respondents have selected Neutral.

TABLE 4.1.13

THE CONTAINER STORING PROCESS ARE FEASIBLE.

S NO	Particulars	No. of Respondents	Percentage
1.	Strongly Agree	21	16.2
2.	Agree	46	35.4
3.	Neutral	55	42.3
4.	Disagree	5	3.8
5.	Strongly Disagree	3	2.3
	Total	130	100

Source: Primary data.

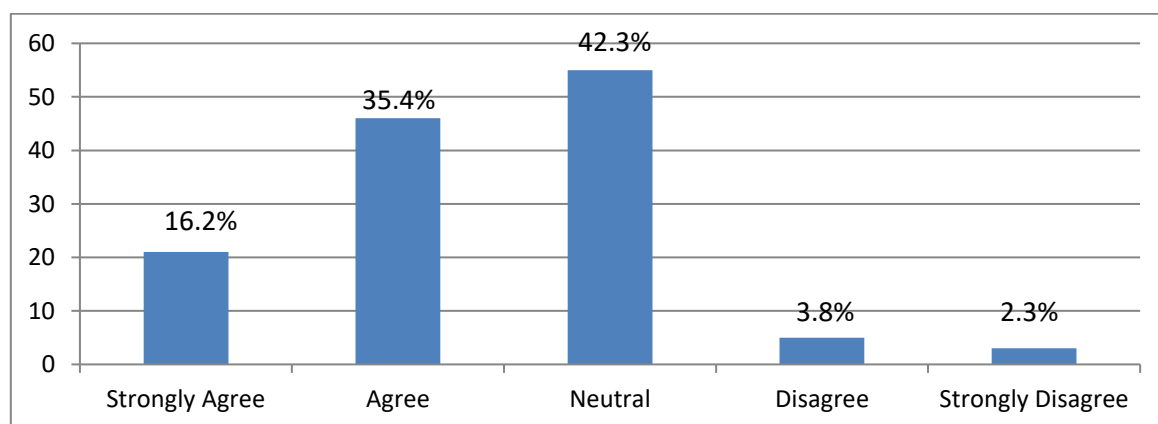


CHART 4.1.13 THE CONTAINER STORING PROCESS ARE FEASIBLE.

Interpretation

From the above table it is interpreted that the number of respondents in Strongly Agree is 16.2%, Agree is 35.4%, Neutral is 42.3%, Disagree is 3.8%, Strongly Disagree is 2.3%.

Inference

Majority (42.3%) of the respondents have selected Neutral.

TABLE 4.1.14

THE BUSINESS GROWTH AND REVENUE GENERATION IN XPRESS MARINE AFTER COVID-19 PANDEMIC

S NO	Particulars	No. of Respondents	Percentage
1.	Very high	15	11.5
2.	High	49	37.7
3.	Moderate	51	39.2
4.	Low	13	10
5.	Very low	2	1.5
	Total	130	100

Source: Primary data.

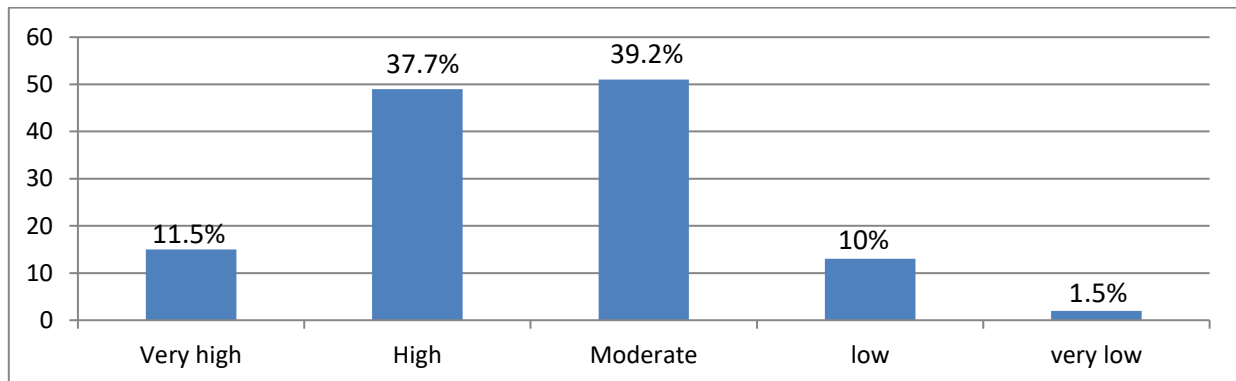


CHART 4.1.14 THE BUSINESS GROWTH AND REVENUE GENERATION IN XPRESS MARINE AFTER COVID-19 PANDEMIC

Interpretation

From the above table it is interpreted that the number of respondents in very high is 11.5%, high is 37.7%, moderate is 39.2%, low is 10%, very low is 1.5%.

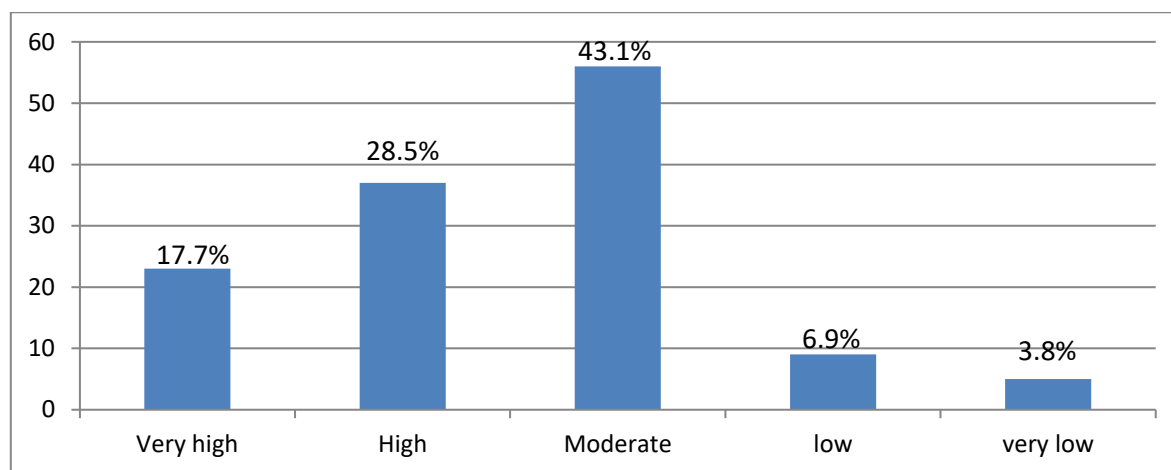
Inference

Majority (39.2%) of the respondents have selected moderate.

TABLE 4.1.15**LEVEL OF FINANCIAL LIMITATIONS FACED DURING COVID-19**

S NO	Particulars	No. of Respondents	Percentage
1.	Very high	23	17.7
2.	High	37	28.5
3.	Moderate	56	43.1
4.	Low	9	6.9
5.	Very low	5	3.8
	Total	130	100

Source: Primary data.

**CHART 4.1.15 LEVEL OF FINANCIAL LIMITATIONS FACED DURING COVID-19****Interpretation**

From the above table it is interpreted that the number of respondents in very high is 17.7%, high is 28.5%, moderate is 43.1%, low is 6.9%, very low is 3.8%.

Inference

Majority (43.1 %) of the respondents have selected moderate.

TABLE 4.1.16

THE RATES WERE CHANGED DURING COVID-19 PANDEMIC

S NO	Particulars	No. of Respondents	Percentage
1.	Strongly Agree	21	16.2
2.	Agree	51	39.2
3.	Neutral	47	36.2
4.	Disagree	11	8.5
5.	Strongly Disagree	0	0
	Total	130	100

Source: Primary data.

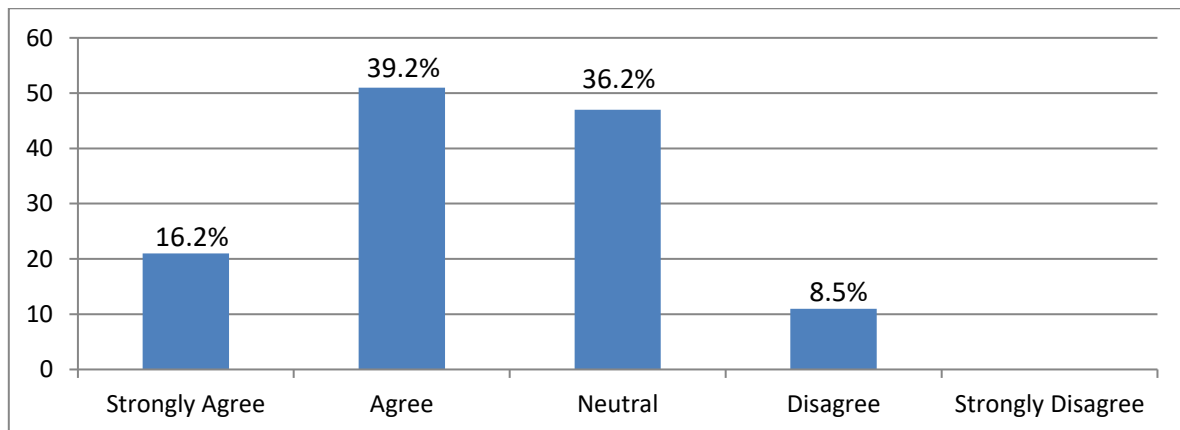


CHART 4.1.16 THE RATES WERE CHANGED DURING COVID-19 PANDEMIC

Interpretation

From the above table it is interpreted that the number of respondents in Strongly Agree is 16.2%, Agree is 39.2%, Neutral is 36.2%, Disagree is 8.5%, Strongly Disagree is 0.

Inference

Majority (39.2%) of the respondents have selected agree.

TABLE 4.1.17

THE PORT CONGESTION SITUATION DURING COVID-19 PANDEMIC

S NO	Particulars	No. of Respondents	Percentage
1.	Very high	23	17.7
2.	High	37	28.5
3.	Moderate	56	43.1
4.	Low	9	6.9
5.	Very low	5	3.8
	Total	130	100

Source: Primary data.

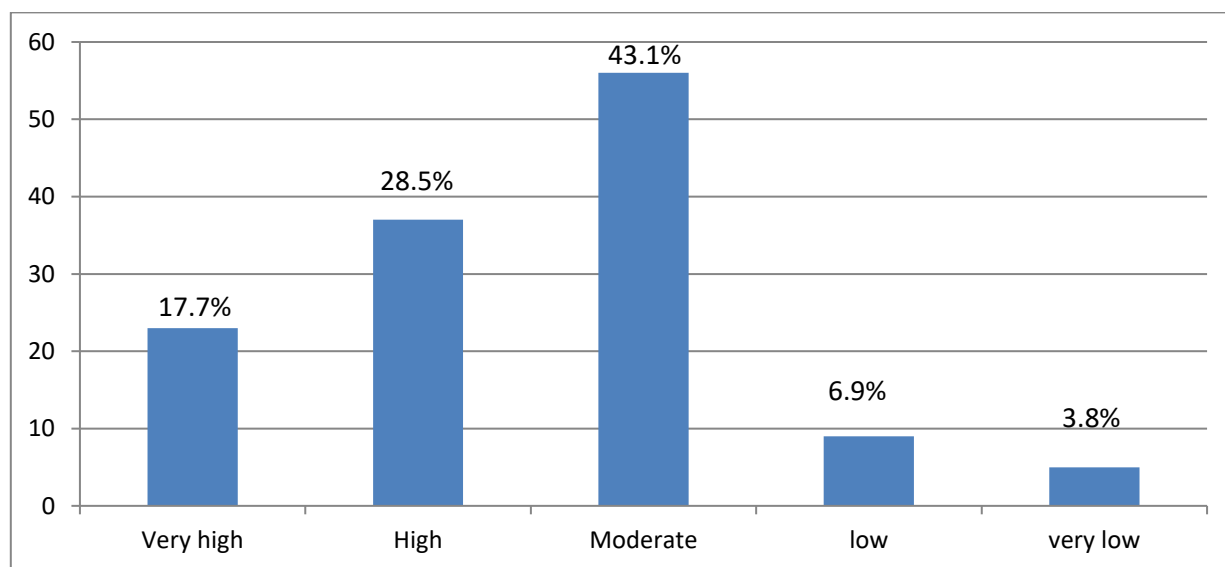


CHART 4.1.17 THE PORT CONGESTION SITUATION DURING COVID-19 PANDEMIC

Interpretation

From the above table it is interpreted that the number of respondents in very high is 17.7%, high is 28.5%, moderate is 43.1%, low is 6.9%, very low is 3.8%.

Inference

Majority (43.1 %) of the respondents have selected moderate.

TABLE 4.1.18
SAFTY MEASURES TAKEN AT PORT.

S NO	Particulars	No. of Respondents	Percentage
1.	Strongly Agree	31	23.8
2.	Agree	44	33.8
3.	Neutral	48	36.9
4.	Disagree	4	3.1
5.	Strongly Disagree	3	2.3
	Total	130	100

Source: Primary data.

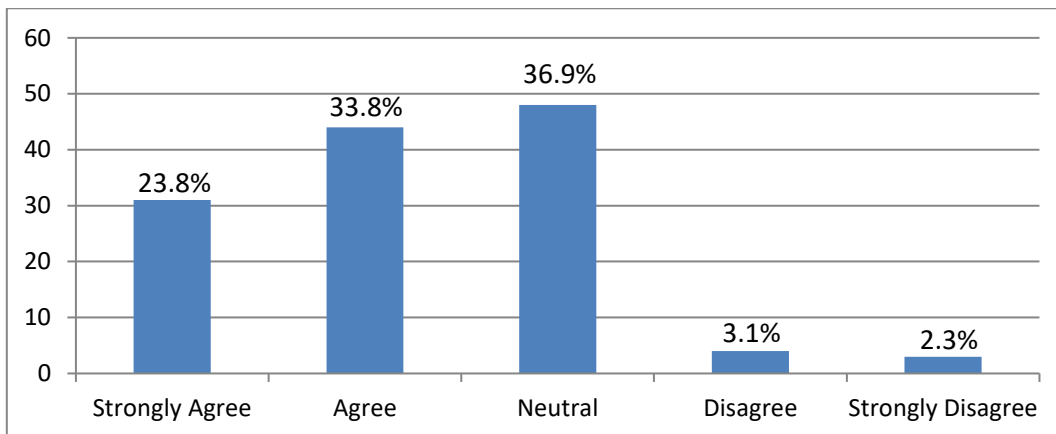


CHART 4.1.18 SAFETY MEASURES TAKEN AT PORT.

Interpretation

From the above table it is interpreted that the number of respondents in Strongly Agree is 23.8%, Agree is 33.8%, Neutral is 36.9%, Disagree is 3.1%, Strongly Disagree is 2.3%.

Inference

Majority (36.9%) of the respondents have selected agree.

TABLE 4.1.19
THE DISTANCE FROM XPRESS MARINE TO PORT

S NO	Particulars	No. of Respondents	Percentage
1.	Very far	21	16.2
2.	Far	49	37.7
3.	Moderate	49	37.7
4.	Nearby	11	8.5
	Total	130	100

Source: Primary data.

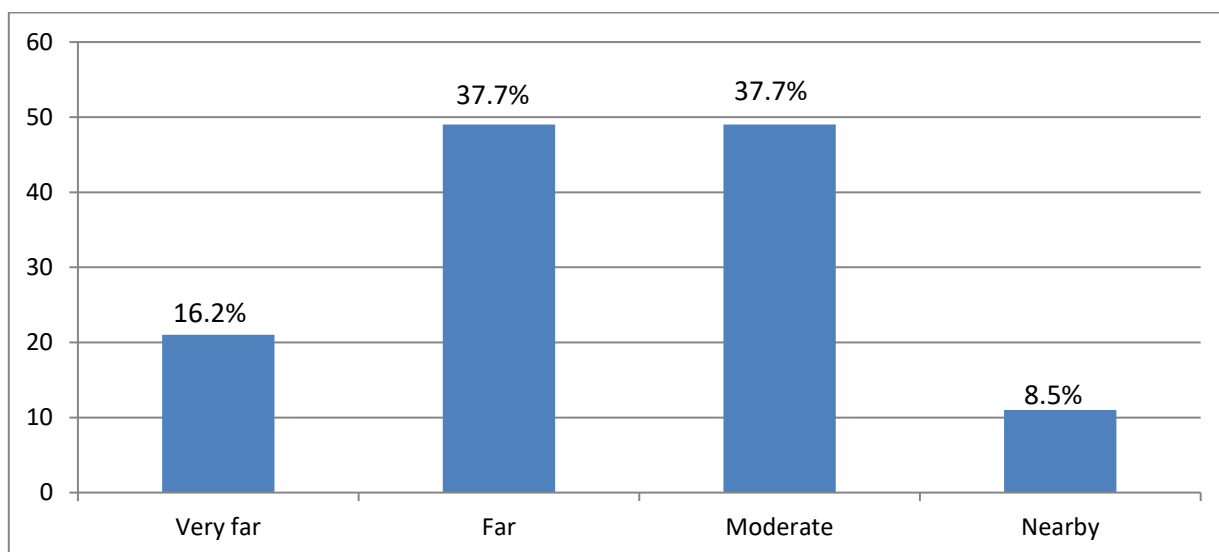


CHART 4.1.19 THE DISTANCE FROM XPRESS MARINE TO PORT

Interpretation

From the above table it is interpreted that the number of respondents in very far is 16.2%, far is 37.7%, moderate is 37.7%, nearby is 8.5%

Inference

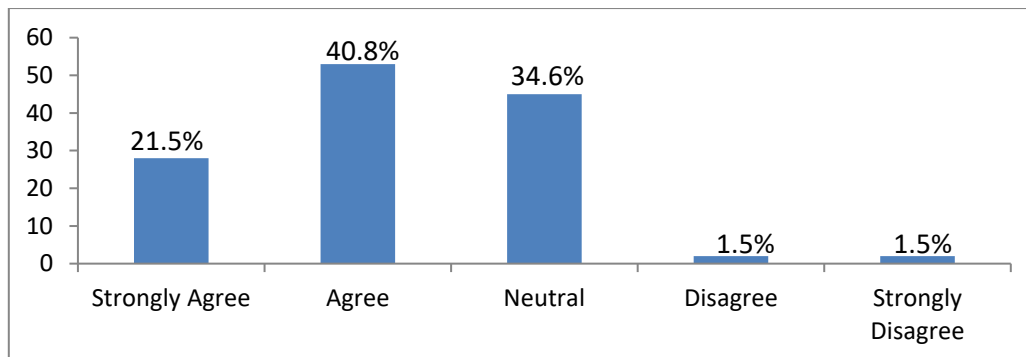
Majority (37.7%) of the respondents have selected far & moderate.

TABLE 4.1.20

**THE TRANSPORTATION MOVEMENT TO & FROM PORT WAS LIMITED
DURING COVID-19 PANDEMIC**

S NO	Particulars	No. of Respondents	Percentage
1.	Strongly Agree	28	21.5
2.	Agree	53	40.8
3.	Neutral	45	34.6
4.	Disagree	2	1.5
5.	Strongly Disagree	2	1.5
	Total	130	100

Source: Primary data



**CHART 4.1.20 THE TRANSPORTATION MOVEMENT TO & FROM PORT WAS
LIMITED DURING COVID-19 PANDEMIC**

Interpretation

From the above table it is interpreted that the number of respondents in Strongly Agree is 21.5%, Agree is 40.8%, Neutral is 34.6%, Disagree is 1.5%, Strongly Disagree is 1.5%.

Inference

Majority (40.8%) of the respondents have selected agree.

4.2.1 CHI SQUARE TEST

Null Hypothesis (H0) – There is no difference between your age and the business growth and revenue generation in Xpress Marine before covid-19 pandemic.

Alternative Hypothesis (H1) - There is difference between your age and the business growth and revenue generation in Xpress Marine before covid-19 pandemic.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Your age * The business growth and revenue generation in Xpress Marine before covid-19 pandemic	130	100.0%	0	0.0%	130	100.0%

Your age * The business growth and revenue generation in Xpress Marine before covid-19 pandemic Crosstabulation

			The business growth and revenue generation in Xpress Marine before covid-19 pandemic					Total
			(a) very high	(b)High	(c)Moderate	(d)Low	(e)Very low	
Your age	(b)26-35years	Count	3	13	12	4	0	32
		Expected Count	5.4	11.8	12.6	2.0	.2	32.0
	(c)36-45years	Count	4	8	14	3	0	29
		Expected Count	4.9	10.7	11.4	1.8	.2	29.0
	(d)46-60years	Count	3	4	5	0	0	12
		Expected Count	2.0	4.4	4.7	.7	.1	12.0
	(e)Above 60years	Count	4	1	2	0	0	7
		Expected Count	1.2	2.6	2.7	.4	.1	7.0
	a)18-25 years	Count	8	22	18	1	1	50
		Expected Count	8.5	18.5	19.6	3.1	.4	50.0
	Total	Count	22	48	51	8	1	130
		Expected Count	22.0	48.0	51.0	8.0	1.0	130.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.995 ^a	16	.269
Likelihood Ratio	18.232	16	.310
Linear-by-Linear Association	2.728	1	.099
N of Valid Cases	130		

- a. 17 cells (68.0%) have expected count less than 5. The minimum expected count is .05.

INFERENCE:

- It is found from the chi square test that the significance value is 0.269 which is greater than 0.05. Hence, Null hypothesis is accepted.
- Therefore, there is a significant difference between your age and the business growth and revenue generation in Xpress Marine before covid-19 pandemic.

4.3.1 CORRELATION ANALYSIS

Null Hypothesis (H0) – There is no significant correlation between the documentation procedures are smooth in Xpress Marine and the business growth and revenue generation in Xpress Marine after covid-19 pandemic.

Alternative Hypothesis (H1) - There is a significant between the documentation procedures are smooth in Xpress Marine and the business growth and revenue generation in Xpress Marine after covid-19 pandemic.

Table 4.3.1: Table showing the correlation between the documentation procedures are smooth in Xpress Marine and the business growth and revenue generation in Xpress Marine after covid-19 pandemic.

Correlations			
		The documentaion procedures are smooth in Xpress Marine.	The business growth and revenue generation in Xpress Marine after covid-19 pandemic
The documentaion procedures are smooth in Xpress Marine.	Pearson Correlation	1	.426**
	Sig. (2-tailed)		.000
	N	130	130
The business growth and revenue generation in Xpress Marine after covid-19 pandemic	Pearson Correlation	.426**	1
	Sig. (2-tailed)	.000	
	N	130	130

** . Correlation is significant at the 0.01 level (2-tailed).

INFERENCE:

Pearson correlation value is 0.426. Therefore, there is positive correlation. So, there is a significant difference between the documentation procedures are smooth in Xpress Marine and the business growth and revenue generation in Xpress Marine after covid-19 pandemic.

CHAPTER 5

FINDINGS, SUGGESTIONS AND CONCLUSION

5.1 FINDINGS

1. Majority (63.8%) of the respondents are Male.
2. Majority (40%) of the respondents fall in the age category of ≤ 25 years.
3. Both (50%) of the respondents fall in the category of married and (50%) fall in the category of unmarried.
4. Majority (28%) of the respondents have incomes between 20,000-30,000.
5. Majority (41.6%) of the respondents have work experience between 1-3 years.
6. Majority (31.5%) of the respondents are from inventory control department.
7. Majority (37.7%) of the respondents have selected agree.
8. Majority (33.1%) of the respondents have selected strongly agree.
9. Majority (40%) of the respondents have selected Neutral.
10. Majority (40%) of the respondents have selected moderate.
11. Majority (36.9%) of the respondents have selected Neutral.
12. Majority (42.3%) of the respondents have selected Neutral.
13. Majority (42.3%) of the respondents have selected Neutral.
14. Majority (39.2%) of the respondents have selected moderate.
15. Majority (43.1 %) of the respondents have selected moderate.
16. Majority (39.2%) of the respondents have selected agree.
17. Majority (43.1 %) of the respondents have selected moderate.
18. Majority (36.9%) of the respondents have selected agree.
19. Majority (37.7%) of the respondents have selected far & moderate.
20. Majority (40.8%) of the respondents have selected agree.

5.2 SUGGESTIONS

- Scheduling of service time point of arrival and departure of rails, ships and plane has great scope for improvement. They never run on time and require national discipline.
- Legal system is not in keeping with the modern outlook of life and business. The laws are out mode and require comprehensive amendments. The laws are infect remnant of British Rule and provision contained therein do not meet the requirements of modern and complex international trade.
- It augurs well observing development of national and selected state highways for faster movement of traffic. It is response to free trade regime being speedily established under the compulsive auspicious of WTO in the interest of humanity. It is hoped that the implementation of the gargantuan project would be on schedule or at least without much time cost overrun.
- In this connection the UPA-I government initiated the greatest ever emphasis on infrastructure development, general and specific ; UPA-2 has lent first priority and invited convergence of all ministries agenda to bear upon this infrastructure subject of international standard to facilitate movement of foreign capital with promise of high profitability as the country cannot movelise resources of the required dimension.
- Logistics development is absolutely necessary. In the absence of flow less and latest logistics, the MNCs shy away from doing business in India. There is need to increase FDI in logistics sphere and relaxing of norms relating to entry, taxation, import of material handling and movement of equipment etc.

5.3 CONCLUSION

Indian logistics industry is continuously improving its performance in the global logistics industry by improvement of customs, trade related infrastructure, inland transits ,logistics services, information system, and port efficiency, help to provide trade goods and services on time and at low cost. The world banks 2007th Global logistics report ranks India 39 amongst 150 countries in terms of logistics performance during the year as well as its texture potential. Indian Logistics industry has low performance than developed countries like USA, UK and Singapore in global logistics sectors due inefficiency in logistics services and highest among the low-income group countries. India spend in Logistics activities equivalent to 13 % of its GDP is higher than that of developed countries. The key reason is the relatively high level of inefficiency in the system with lower average trucking speeds, higher turnaround time at ports and high cost of administrative delays. 3PL service provider share is less in logistics sector in India as compare to developed countries and still at the nascent stage. Multinational companies in all industries have been predominant users of this service as one of reason for lesser share 3PL in India. Also in India organised sector not well established as compare to developed nation this contain cost of inventory holding, transportation, warehousing, packaging, loss and related to administration is higher. In Indian logistics sector major sector investors are Aviation, Metal & Mining and Consumer Durable. Also logistics industry in India improves the performance of other industries year to year and share of logistics cost in sale also important which is maximum in cement sector. Transportation modes grow with of domestic and international market and in India road better mode of transportation because of well infrastructure of roads in India as compare to other mode like water, rail and sea. Road freight in India grows with increase of domestic and international trade also large area coverage. Railway freight also increases due low freight as compare to road but cover some of area and better for long distance movement of goods. Sea freight also increase better for overseas movement of goods at low cost as compare to air but consume more time as compare to air. Air mode of transportation is also helps in both domestic and international movement of goods but for international movement is more as compare to the domestic due to the higher cost, safe and faster way as compare to others modes.

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APPENDIX – I QUESTIONNAIRES

1. Gender

- (a)Male
- (b)Female

2. Your age

- (a)18-25 years
- (b)26-35years
- (c)36-45years
- (d)46-60years
- (e)Above 60years

3. Marital Status

- (a)Married
- (b)Unmarried

4. Income

- (a)10000-15000
- (b)15000-20000
- (c)20000-30000
- (d)30000-35000
- (e)Above 35000

5. Working Experience

- (a) 0-1 year
- (b) 1-3 years
- (c) 4-5 years
- (d) More than 5 years

6. Which department do you work for?

- (a) Order processing
- (b) Material handling
- (c) Inventory control
- (d) Warehousing
- (e) Transportation

7. The covid-19 pandemic has brought changes in the operations of Xpress Marine.

- (a) Strongly Agree
- (b) Agree
- (c) Neutral
- (d) Disagree
- (e) Strongly Disagree

8. Due to covid-19 pandemic, there was change in working hours.

- (a)Strongly Agree
- (b)Agree
- (c)Neutral
- (d)Disagree
- (e)Strongly Disagree

9. Working from home during covid-19 is effective.

- (a)Strongly Agree
- (b)Agree
- (c)Neutral
- (d)Disagree
- (e)Strongly Disagree

10. The business growth and revenue generation in Xpress Marine before covid-19 pandemic

- (a) very high
- (b)High
- (c)Moderate
- (d)Low
- (e)Very low

11. The business growth and revenue generation in Xpress Marine after covid-19 pandemic

- (a) very high
- (b)High
- (c)Moderate
- (d)Low
- (e)Very low

12. Level of financial limitations faced during covid-19

- (a)Strongly Agree
- (b)Agree
- (c)Neutral
- (d)Disagree
- (e)Strongly Disagree

13. The port operations in Xpress Marine are smoothly processing.

- (a)Strongly Agree
- (b)Agree
- (c)Neutral
- (d)Disagree
- (e)Strongly Disagree

14. The documentation procedures are smooth in Xpress Marine.

- (a)Strongly Agree
- (b)Agree
- (c)Neutral
- (d)Disagree
- (e)Strongly Disagree

15. The container storing process is feasible.

- (a)Strongly Agree
- (b)Agree
- (c)Neutral
- (d)Disagree
- (e)Strongly Disagree

16. The Rates were changed during covid-19 pandemic.

- (a)Strongly Agree
- (b)Agree
- (c)Neutral
- (d)Disagree
- (e)Strongly Disagree

17. The port congestion situation during covid-19 pandemic.

- (a) very high
- (b) High
- (c) Moderate
- (d) Low
- (e) Very low

18. Safety measures taken at port.

- (a) Strongly Agree
- (b) Agree
- (c) Neutral
- (d) Disagree
- (e) Strongly Disagree

19. The distance from Xpress Marine to port.

- (a) Very far
- (b) Far
- (c) Moderate
- (d) Nearby

20. The transportation movement to & from port was limited during covid-19 pandemic.

- (a)Strongly Agree
- (b)Agree
- (c)Neutral
- (d)Disagree
- (e)Strongly Disagree

APPENDIX – II (Article)

A STUDY OF OPERATION IN COASTAL LOGISTICS PRE & POST COVID-19 AT XPRESS MARINE

RIXON RAJA R

**(Student, School of Management Studies, Sathyabama Institute of Science
and Technology, Chennai.)**

Dr. DHIVYA SATHISH

**(Assistant professor School of Management Studies, Sathyabama Institute
of Science and Technology, Chennai.)**

ABSTRACT

The purpose of this study of operation in coastal logistics pre & post covid-19 at Xpress Marine will help us to understand the needs & wants of the customers towards the logistics operations and port operations . The study could provide appropriate and timely information about the position of preference level of customers. As the objectives of this study is to analyse the pre and post covid-19 situation in Xpress Marine, to analyze the performance of the ports process and strategies ,to analyze the problem they faced in the harbors to suggest some measures to overcome the problem they faced. For this purpose, 130 respondents were selected from Xpress Marine and obtained the various responses based on the questionnaire method.

INTRODUCTION:

India has a long coastline of 5,560 Km ., having access to the sea on three sides with 11 major and 168 minor/intermediate ports. Major ports are directly under the administrative control of Central Government while minor/intermediate ports are managed and administered by the respective maritime State Governments. It is a well known fact that the shipping has always been regarded as an important transport sector of national activities in all maritime countries, and it is well suited for transportation of bulk cargoes at low cost. Coastal Shipping, as a complimentary mode of transport is not only an economic necessity but also a valuable asset in times of emergency.

REVIEW OF LITERATURE

KAMBLE,S SACHIN ,RAOOT, D ARUN ,KHANAPURI,B VIVEK (2010) states that the age of globalisation, seaports play a vital role in connecting national supply chains to the global marketplace. Improving port operations has become a priority for many countries. One of the ways to achieve this objective is evaluating the present efficiency as per the parameters laid down for port industry.

ADOLF K.Y. NG AND GIRISH GUJAR (2009) states by investigating dry ports within two industrial clusters in Northern India, this paper investigates the locational characteristics of distribution centres in developing economies.

DR. T. RAJASEKAR , DR. MALABIKA DEO (2014) states In this paper, an attempt has been made to measure the efficiency difference between input and output oriented Data Envelopment Analysis (DEA) models for major ports in India over the period of 1993 - 2013. It was assumed that there is no difference between the efficiency of ports based on its orientation i.e. either input oriented or output oriented. Based on the empirical results, the operational efficiency of the ports like JNPT, Kandla, Mormugao and Ennore was observed as efficient ports in both the orientation. Thus can be conclude that there is no difference in efficiency identification of Decision Making Units (DMUs).

OBJECTIVES OF THE STUDY

The main purpose of this project is to find and analyse the response towards covid 19 situations faced by Xpress Marine.

PRIMARY OBJECTIVE:

To analyze pre & post covid 19 situation in Xpress Marine

SECONDARY OBJECTIVE:

To analyze the performance of the ports process and strategies.

RESEARCH METHODOLOGY

Business research is a systematic enquiry that provides Information to guide business decisions and aimed to solve managerial problems. Business research is of recent origin and it is largely supported by business organizations that hope to achieve competitive advantages. Research methodology is a way to systematically solve the research problems. It may be understood as a science of studying how research is done scientifically. It includes the overall research design, the sampling procedure, data collection method and analysis procedure.

DATA ANALYSIS AND INTERPRETATION

Percentage Analysis

GENDER CLASSIFICATION OF THE RESPONDENTS

S NO	Particulars	No. of Respondents	Percentage
1.	Male	83	63.8
2.	Female	45	34.6
3.	Prefer not to say	2	1.5
	Total	130	100

Source: primary data.

AGE WISE CLASSIFICATION OF RESPONDENTS

S NO	Particulars	No. of Respondents	Percentage
1.	<= 25 Years	52	40
2.	26 - 35 Years	31	23.8
3.	36 - 45 Years	28	21.5
4.	46 - 60 years	12	9.2
5.	Above 60 Years	7	5.4
	Total	130	100

Source: Primary data.

MARITAL STATUS OF THE RESPONDENTS

S NO	Particulars	No. of Respondents	Percentage
1	Married	65	50
2	Unmarried	65	50
	Total	130	100

Source: Primary data.

DUE TO COVID-19 PANDEMIC, THERE WAS CHANGE IN WORKING HOURS

S NO	Particulars	No. of Respondents	Percentage
1.	Strongly Agree	43	33.1
2.	Agree	42	32.3
3.	Neutral	39	30
4.	Disagree	5	3.8
5.	Strongly Disagree	1	0.8
	Total	130	100

Source: Primary data.

CHI SQUARE TEST

Null Hypothesis (H0) – There is no difference between your age and the business growth and revenue generation in Xpress Marine before covid-19 pandemic.

Alternative Hypothesis (H1) - There is difference between your age and the business growth and revenue generation in Xpress Marine before covid-19 pandemic.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Your age * The business growth and revenue generation in Xpress Marine before covid-19 pandemic	130	100.0%	0	0.0%	130	100.0%

Your age * The business growth and revenue generation in Xpress Marine before covid-19 pandemic Crosstabulation

			The business growth and revenue generation in Xpress Marine before covid-19 pandemic					Total
			(a) very high	(b)High	(c)Moderate	(d)Low	(e)Very low	
Your age	(b)26-35years	Count	3	13	12	4	0	32
		Expected Count	5.4	11.8	12.6	2.0	.2	32.0
	(c)36-45years	Count	4	8	14	3	0	29
		Expected Count	4.9	10.7	11.4	1.8	.2	29.0
	(d)46-60years	Count	3	4	5	0	0	12
		Expected Count	2.0	4.4	4.7	.7	.1	12.0
	(e)Above 60years	Count	4	1	2	0	0	7
		Expected Count	1.2	2.6	2.7	.4	.1	7.0
	a)18-25 years	Count	8	22	18	1	1	50
		Expected Count	8.5	18.5	19.6	3.1	.4	50.0
	Total	Count	22	48	51	8	1	130
		Expected Count	22.0	48.0	51.0	8.0	1.0	130.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.995 ^a	16	.269
Likelihood Ratio	18.232	16	.310
Linear-by-Linear Association	2.728	1	.099
N of Valid Cases	130		

b. 17 cells (68.0%) have expected count less than 5. The minimum expected count is .05.

INFERENCE:

- It is found from the chi square test that the significance value is 0.269 which is greater than 0.05. Hence, Null hypothesis is accepted.
- Therefore, there is a significant difference between your age and the business growth and revenue generation in Xpress Marine before covid-19 pandemic.

FINDINGS

1. Majority (63.8%) of the respondents are Male.
2. Majority (40%) of the respondents fall in the age category of ≤ 25 years.
3. Both (50%) of the respondents fall in the category of married and (50%) fall in the category of unmarried.
4. Majority (28%) of the respondents have incomes between 20,000-30,000.
5. Majority (41.6%) of the respondents have work experience between 1-3 years.

SUGGESTIONS

- Scheduling of service time point of arrival and departure of rails, ships and plane has great scope for improvement. They never run on time and require national discipline.
- Logistics development is absolutely necessary. In the absence of flow less and latest logistics, the MNCs shy away from doing business in India. There is need to increase FDI in logistics sphere and relaxing of norms relating to entry, taxation, import of material handling and movement of equipment etc.

CONCLUSION

Indian logistics industry is continuously improving its performance in the global logistics industry by improvement of customs, trade related infrastructure, inland transits ,logistics services, information system, and port efficiency, help to provide trade goods and services on time and at low cost. The world banks 2007th Global logistics report ranks India 39 amongst 150 countries in terms of logistics performance during the year as well as its texture potential. Air mode of

transportation is also helps in both domestic and international movement of goods but for international movement is more as compare to the domestic due to the higher cost, safe and faster way as compare to others modes.

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