

A STUDY ON LOGISTIC MANAGEMENT ON ANABOND LIMITED CHENNAI

Submitted in partial fulfillment of the requirements for the award of

Master of Business Administration

By

RUPERT RAYNER R

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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



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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **RUPERT RAYNER R 39410175** who carried out the project entitled **"A STUDY ON LOGISTIC MANAGEMENT ON ANABOND PRIVATE LIMITED CHENNAI"** under my supervision from **February 2021 to March 2021**.

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DECLARATION

I, **RUPERT RAYNER R 39410175** hereby declare that the Project Report entitled "**A Study on LOGISTIC MANAGEMENT ON ANABOND PRIVATE LIMITED CHENNAI**" done by me under the guidance of **Ms. KAVITHA RAJAYOGAN** is submitted in partial fulfillment of the requirements for the award of Master of Business Administration degree.

DATE:

PLACE:

RUPERT RAYNER R

ACKNOWLEDGEMENT

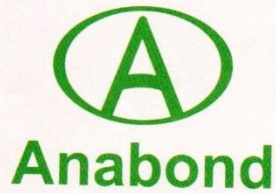
I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my thanks to Dr. **Dr. BHUVANESWARI G.**, Dean, School of Business Administration and **Dr. PALANI A.**, Head, School of Business Administration for providing me necessary support and details at the right time during the progressive reviews.

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I wish to express my thanks to all Teaching and Non-teaching staff members of the School of Business Administration who were helpful in many ways for the completion of the project.

RUPERT RAYNER R



Date: 01.03.2021

CERTIFICATE

This is to certify that **Mr.Rupert Rayner, 2nd year, MBA - Finance & Operations, Sathyabama Institute of science and Technology, Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119..** has successfully completed his **Internship training on Logistics Management** in our Organization as a part of the curriculum from **01.02.2021 to 28.02.2021.**

This certificate is issued upon the request of the candidate.

**Cordially Yours
For Anabond Limited**

**Manimaran.P
Senior Manager**

Anabond Limited

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ABSTRACT

Now a days companies implement supply chain management and logistics management to reduce costs, increase performance and enhance operational efficiency. The logistics in modern business conditions coordinates and integrates the movement of materials and products from physical, organizational and information aspect. This research aims to study ANABOND LTD, CHENNAI company's logistics management including transportation, warehousing, packaging, inventory and information management. Reducing cost of each logistics activity influences the total amount of costs and enhances company's performance. This paper determines and defines the logistics activities that are of key importance to the company's success. The descriptive research adopted in this study. Totally 120 samples were collected from the middle managers. The general hypothesis is fully validated and proven by the survey results. Adequate inventory, storage, warehousing, transport and information management are key targets for logistics managers in order to reduce the overall costs of the company. Findings include the confirmation of the necessity of logistics managers to optimally manage all logistics activities in order to gain increased business efficiency.

TABLE OF CONTENTS

Chapter No	Title	Page No
	ABSTRACT	i
	LIST OF TABLES	iv
	LIST OF CHARTS	vi
	LIST OF FIGURES	vii
1	INTRODUCTION	1
	1.1 Introduction	1
	1.2 Industry Profile	1
	1.3 Company Profile	6
	1.4 Need for the study	11
	1.5 Scope of study	12
	1.6 Objectives of study	13
	1.7 Limitations of study	13
2	REVIEW OF LITERATURE	14
3	RESEARCH METHODOLOGY	22
	3.1 Research Design	22
	3.2 Sampling Technique	22
	3.3 Sources of data	23
	3.4 Structure of Questionnaire	23
	3.5 Sample size	23
	3.6 Period of study	23
	3.7 Analytical Tools	24
4	DATA ANALYSIS AND INTERPRETATION	25
	4.1 Percentage Analysis	25
	4.2 Chi-square	46
	4.3 ANOVA	49
	4.4 Correlation	52

5	FINDINGS, SUGGESTIONS AND CONCLUSION	54
	5.1 Findings	54
	5.2 Suggestions	55
	5.3 Conclusion	55
	REFERENCES	56
	BIBLIOGRAPHY	58
	APPENDIX-I (Questionnaire)	59
	APPENDIX-II (Article)	

LIST OF TABLES

Table No	Particulars	Page No
4.1.1	Table showing Age of the respondents	25
4.1.2	Table showing Gender of the respondents	26
4.1.3	Table showing Designation of the respondents	27
4.1.4	Table showing Monthly Income of the respondents	28
4.1.5	Table showing Assurance for effective moment to the respondents	29
4.1.6	Table showing Effective tracking means of the respondents	30
4.1.7	Table showing Purchase of Raw material of the respondents	31
4.1.8	Table showing Raw Material Best quality to the respondents	32
4.1.9	Table showing Raw Material delivered on time to the respondents	33
4.1.10	Table showing Effective medium of transportation of the respondents	34
4.1.11	Table showing Raw Material delivered on time to the respondents	35
4.1.12	Table showing Short lead time of the respondents	36
4.1.13	Table showing Less no of defects received from vendors to the respondents	37
4.1.14	Table showing Short time to replace damage products of the respondents	38
4.1.15	Table showing Difficult to identify damaged products to the respondents	39
4.1.16	Table showing Implementing 3PL reduces transportation cost to the respondents	40
4.1.17	Table showing Delivering through IPL involves high risk to the respondents	41
4.1.18	Table showing 3PL helps in effective transportation to the respondents	42
4.1.19	Table showing All stock are properly stored in warehouse to the respondents	43
4.1.20	Table showing All stocks are taken back from inventory without damage to the respondents	44
4.1.21	Table showing All products are sorted and stored according to the nature of product to the respondents	45
4.2.1	Table showing the crosstabulation effective tracking means[customized order and implementing 3PL reduces transportation cost]	46
4.2.2	Table showing the Chi-square tests effective tracking means[customized order and implementing 3PL reduces transportation cost]	46

4.2.3	Table showing the crosstabulation effective tracking means[customized tracking means and delivering through 3PL involves high risk]	47
4.2.4	Table showing the Chi-square tests effective tracking means[customized tracking means and delivering through 3PL involves high risk]	47
4.2.5	Table showing the Crosstabulation effective tracking means [Customized tracking means and 3PL helps in effective transportation]	48
4.2.6	Table showing the chi-square tests effective tracking means [Customized tracking means and 3PL helps in effective transportation]	48
4.3.1	Table showing the descriptive relationship between transportation modes and defects in new arrival of raw material	49
4.3.2	Table showing the ANOVA relationship between transportation modes and defects in new arrival of raw material	49
4.3.3	Table showing the descriptive relationship between transportation modes and short time replace damaged material	50
4.3.4	Table showing the ANOVA relationship between transportation modes and short time replace damaged material	50
4.3.5	Table showing the descriptive relationship between transportation modes and difficult to identify damaged products	51
4.3.6	Table showing the ANOVA relationship between transportation modes and difficult to identify damaged products	51
4.4.1	Table showing the correlation between defects in Raw Material and implementation of 3PL reduces of transportation cost	52
4.4.2	Table of showing the correlation between short time to replace damaged products and 3PL helps in effective transportation	53

LIST OF CHARTS

Table No	Particulars	Page No
4.1.1	Chart representing Age of the respondents	26
4.1.2	Chart representing Gender of the respondents	27
4.1.3	Chart representing Designation of the respondents	28
4.1.4	Chart representing Monthly Income of the respondents	29
4.1.5	Chart representing Assurance for effective moment to the respondents	30
4.1.6	Chart representing Effective tracking means of the respondents	31
4.1.7	Chart representing Purchase of Raw Material of the respondents	32
4.1.8	Chart representing Raw Material Best quality of the respondents	33
4.1.9	Chart representing Raw Material delivered on time to the respondents	34
4.1.10	Chart representing Effective medium of transportation to the respondents	35
4.1.11	Chart representing Raw Material delivered on time to the respondents	36
4.1.12	Chart representing Short lead time of the respondents	37
4.1.13	Chart representing Less no of defects received from vendors to the respondents	38
4.1.14	Chart representing Short time to replace damage products to the respondents	39
4.1.15	Chart representing Difficult to identify damaged products of the respondents	40
4.1.16	Chart representing Implementing 3PL reduces transportation cost to the respondents	41
4.1.17	Chart representing Delivering through IPL involves high risk to the respondents	42
4.1.18	Chart representing 3PL helps in effective transportation to the respondents	43
4.1.19	Chart representing All stock are properly stored in warehouse to the respondents	44
4.1.20	Chart representing All stocks are taken back from inventory without damage to the respondents	45
4.1.21	Chart representing All products are sorted and stored according to the nature of product to the respondents	46

LIST OF FIGURES

Figure No	Particulars	Page No
1.1	Organization chart of Anabond Ltd	7
1.2	Process of Inbound Logistics	8

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION OF THE STUDY

There has been a change in the way business is conducted today. Due to the development in technology, the logistics management has evolved and gained greater significance in doing business. Logistics management is treated as a part of the supply chain management that deals with management of goods in an efficient way. It is the management process that integrates the movement of goods, services, information and capital, right from the sourcing of raw material, to the consumer (Springinklee and Wallenburg, 2012). The goal of the logistics management is to provide the right product with the right quality at the right time in the right place at the right price to the ultimate customer (Mentzer et al., 2004). Logistics management has been defined as a high priority for contemporary organizations. The success of logistics management is determined through the combination of efficiency, effectiveness and differentiation (Fugate et al., 2010). Eventually, supply chain management measures through procrastination affect price/cost, product's quality, innovation and marketing time (Mamad and Chahdi, 2013).

1.2 INDUSTRY PROFILE

Adhesives (glues) are substances capable of forming and maintaining a bond between two surfaces, and sealants (caulks) are substances used to fill gaps or joints between two materials to prevent the passage of liquids, solids or gases. Adhesives and sealants are formulated by compounding (mixing) the base material with fillers, pigments, stabilizers, plasticizers and other additives to yield a product with the desired end-use characteristics at an acceptable cost. Low-to medium-performance products are based on natural substances (for example, starch, dextrin, natural rubber or protein) or synthetic polymers such as polyvinyl acetate, polyvinyl alcohol, polyesters, acrylics, neoprene, butyl rubber, phenolics or thermoplastic elastomers. High performance products have enhanced properties including bond strength, elongation capacity, durability or environmental resistance. These products are based on polymers such as epoxy, polysulfide, polyurethane, cyanoacrylate and

silicone. Adhesives and sealants can be classified according to their two major markets industrial and consumer. The industrial segment is estimated to account for about 80 percent of the Canadian market. Nearly all manufacturers produce a wide range of products, which are consumed in the major end-use markets. Major users of adhesives are the packaging, automotive, construction and furniture industries. Sealants are used primarily by the construction, electronics and automotive industries. A large and growing element of the consumer market is aimed at the "do-it-your-selfer" engaged in building maintenance and renovation. The consumption of low cost adhesives and sealants in a variety of low to medium performance applications is still sizeable, but the overall market for these products is either flat or declining. However, in higher performance components of the industry, the prospects for growth are good. The following examples highlight some of the expected growth areas. The packaging industry is expected to consume greater quantities of adhesives in containers and flexible packaging. While this industry uses many types of adhesives, hot-melt products are expected to grow most quickly, because they are particularly suitable to modern, high-speed processes. New applications in construction represent huge potential markets. Floor systems can be adhesively bonded to supporting joists, adding increased strength and rigidity. Interior wallboard and panelling can be adhered to studs, providing wall surfaces free from blemishes caused by nail or screw heads. Structural sealants can be used to hold curtain wall panels and insulating glass units in place, sometimes without accompanying support from mechanical fasteners. The automotive market also offers significant potential for new opportunities. Products are already used for interior applications (such as bonding decorative trim and carpeting, and sealing doors and windows) and for exterior applications (including vinyl roofs and side mouldings). Increased use of polymer composites will lead to increased adhesive consumption. Even in conventional metal construction, adhesive usage is expected to increase to overcome the problems of corrosion and vibration noise associated with mechanical fasteners and spot welding. The aerospace industry is also using increasing amounts of adhesives and sealants for essentially the same reasons as the automotive industry. Additional opportunities exist for products suitable for use in high-temperature applications near engines, and for products able to withstand the

increased stresses resulting from higher travelling speeds. The India flooring installation adhesive market size is expected to reach USD 135.7 million by 2027, according to a new report by Grand View Research, Inc. The market is projected to register a CAGR of 5.2% in terms of revenue, over the forecast period. Rising technological advancements and growing research and development activities are the factors likely to contribute to the product demand. The quantity and type of adhesive used to depend on the type of substrate or flooring. For instance, epox floor products are capable of producing high-strength, durable bonds. They are suitable for both interior and exterior applications and are resistant to water, dilute acids, alkali, most of the solvents, and oil. They are suitable for most of the types of flooring including resilient and wooden. Novel products are being introduced in the market, which offers simplification of work, enhanced adhesion, and environment friendly nature. The establishment of new reforms, such as the Make in India campaign, formed by the government has strengthened the country's economy. Valiant efforts by the local government and the increasing interests of foreign companies to invest and establish their manufacturing plants in India are expected to increase the demand for flooring installation adhesives, which, in turn, period. Increasing demand for vinyl flooring can be attributed to the growing consumer preference for PVC floor coverings and floor tiles, which, in turn, has led adhesive manufacturers to expand their product range for providing ease at the time of installation. For instance, Bostik, a leading adhesive manufacturer, provides several products based on luxury vinyl tile, vinyl tile, vinyl adhesive sprayer, vinyl sheet, and headliner for vinyl flooring applications. Laminate flooring is preferred in India owing to its low-cost and appearance similar to wood. Based on its installation, it can be classified into glued, glueless, and pre-glued. The glued type needs the adhesive to be spread on the floor before laying the laminate flooring. The glueless type does not require additional adhesive, instead, they are manufactured with special tongue and edges. India Flooring Installation Adhesives Market Report Highlights Resilient flooring was the largest application segment in 2019 and accounted for a volume of 29,802.2 tons in 2019. Growing demand in the construction of restaurants, living rooms, and manufacturing facilities is projected to fuel the growth of this application segment. Artificial turf is projected to witness the fastest CAGR of 7.8% in terms of revenue. Benefits over natural grass, which comprises durability, less maintenance, and saving on water consumption are some of the key contributing factors for the growth of the segment. Wooden flooring accounted for a revenue share of 37.5% in

2019. Increasing penetration of hardwood, engineered wood, and bamboo wood is key attributing for the growth. Adhesives and sealants market research report includes in-depth coverage of the industry trends, with estimates & forecast in terms of volume (Kilo Tons) and revenue (USD Million) from 2015 to 2026, for the following segments

Adhesives Market Segment

By Technology

- Water based
- Solvent based
- Hot melt
- Reactive & other

By Product

- Acrylic
- PVA
- Polyurethanes
- Styrenic block
- Epoxy
- EVA

By Application

- Pressure sensitive applications
- Packaging
- Construction
- Furniture
- Footwear
- Automotive
- Other

Sealants Market Segment

By Product

- Silicones
- Polyurethanes
- Acrylic

- Polyvinyl acetate
- Other

By Application

- Construction
- Automotive
- Packaging
- Assembly
- Pressure sensitive tapes
- Consumers

The above information has been provided for the following regions and countries:

By Region

- North America
- U.S.
- Canada
- Mexico
- Europe
- Germany
- UK
- France
- Italy
- Spain
- Asia Pacific
- China
- India
- Japan
- South Korea
- Australia
- Latin America
- Brazil
- Middle East & Africa
- South Africa

- UAE
- Saudi Arabia

1.3COMPANY PROFILE

Anabond is a company headquartered in Thiruvannamiyur Chennai, India. It manufactures engineering adhesives and sealants which are used in automobile and engineering product manufacturing, electrical and electronic products manufacturing and maintenance of these equipments.

- HEADQUARTERS : CHENNAI
- FOUNDED : 1979
- SUBSIDIARIES : ANABOND HS BUTYL PVT LTD, ANABOND ESSEX INDIA PVT LIMITED

Anabond Limited is one of the leading manufacturers of Engineering Adhesives & Sealants, Paints, Specially Coatings & other chemical formulations in India since 1979 for Automobile, Aerospace & Defence, Industrial, Energy, Construction, Marine, Railway, Vehicle Construction Industries. Anabond is the first company to manufacture Anaerobic Adhesives, RTV Silicone sealants & Single component Epoxies in India. Anabond is an ISO 9001-2008, ISO 14001 : 2004 & ISO / TS - 16949 : 2009 certified Company. Anabond's ultimate vision is to become a leader in technology and a globally competitive company with the strong support of in-house Research & Development setup. Anabond R&D centre is approved by the Department of Scientific & Industrial Research (Govt. of India) New Delhi as an in house R&D unit involved in development of Adhesives & Sealants. Anabond is fully equipped with four manufacturing facilities in India & its orientation has been to produce quality products at a minimum cost. Few of Anabond credentials are Best Vendor award from M/s. Maruti Udyog Limited a leading manufacturer of automobiles in India, Appreciation award from M/s Indian Space Research organization a Govt. of India Enterprise, Excellence Award from M/s Whirlpool of India Ltd & 100% vendor rating from auto majors TATA Motors, M/s Ashok Leyland etc. Anabond has 14 branches and 300 dealer networks in India to cater to the need of the Industrial & FMCG market, apart from several counter sales dealers. Anabond Overseas operation started in the year 1994 & now exports to U.K, Germany, Malaysia, Mauritius, Singapore, Thailand, Sri Lanka, Taiwan,, U.A.E, Saudi & Kuwait

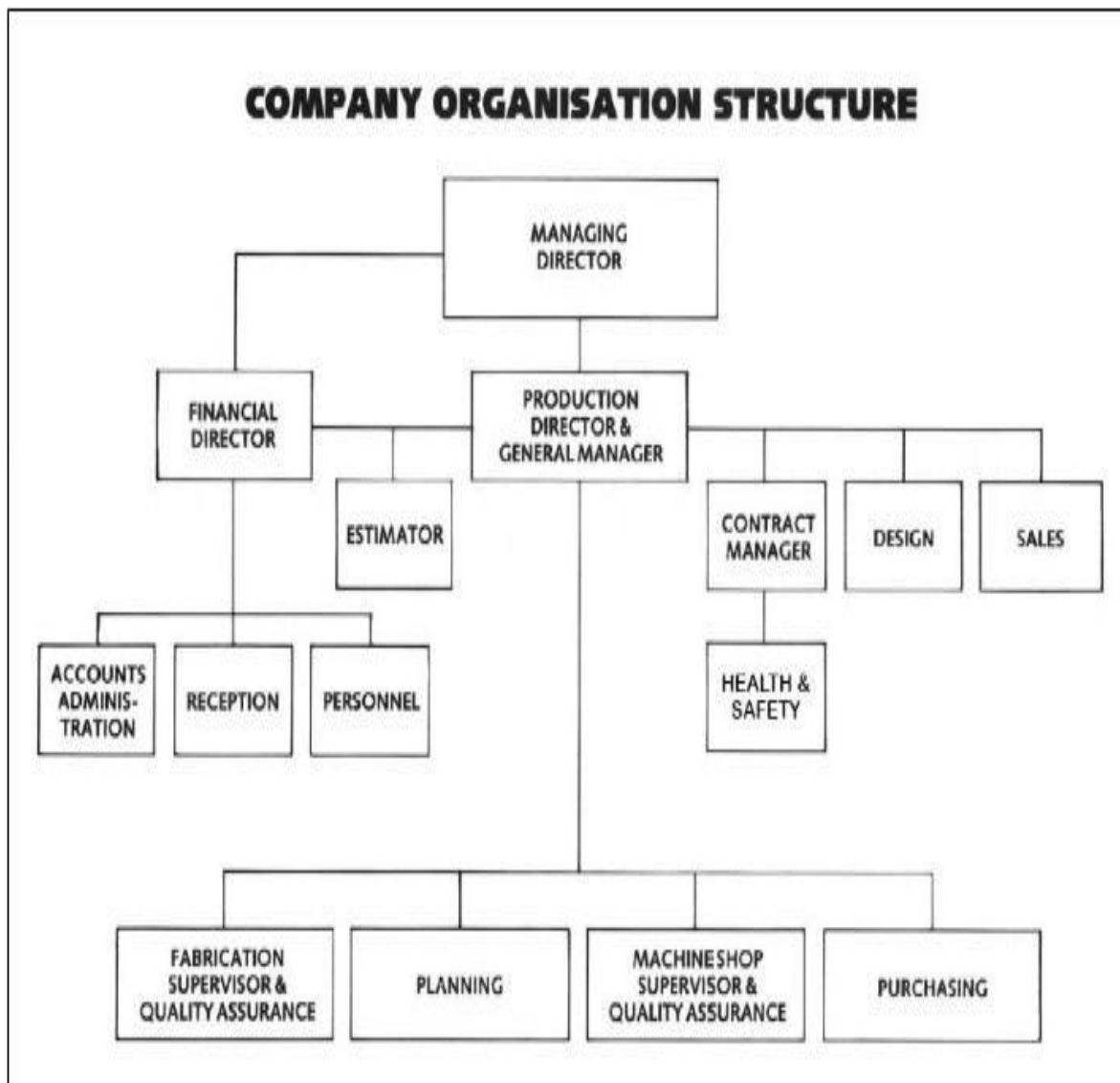


FIG: 1.1 ORGANIZATION CHART OF ANABOND LTD

HISTORY

- **1979** March 19th Anabond Corporation was formed to do research on Anaerobic Adhesives and sealants. **1980 The first anaerobic grade Permaloc TP was approved at BHEL .**
- **1981** Office & manufacturing unit established at Type II, Dr.V.S.I Estate, Chennai, India.
- **1983** Anabond entered railways as a supplier.
- **1984** Silicone sealant manufacturing unit inaugurated.
- Anabond started its first branches at Coimbatore and Bangalore
- Corporate office inaugurated at 3A, Adyar Bridge road. Chennai, India.
- **1985** First supply to Indian Navy

- **1992** First supply to Aerospace
- **1996** Anabond purchased its first factory site at Thirubhuvanai, Pondicherry (Current Location of the factory)
- **1998** Pondicherry factory inaugurated with 22 tons capacity per month.
- First Exports flagged off.
- Anabond Pvt. Ltd. became a public limited company.
- **1999** Coatings division started.
- **2001** Illalur Production facility established,
- Anabond Pondicherry plant Certified with ISO / TS 16949.
- **2004** Ezhichur Production Plant established,
- **2005** MEPZ Production Plant and the Meghalaya plant established
- **2010** Corporate office at Thiruvananthapuram, Chennai inaugurated
- **2013** Anabond HS Butyl established by a joint venture with HS Butyl of UK.

INBOUND LOGISTICS

Inbound logistics is a trade cycle how goods are transported and stored when in transit this could be on truck, ship, in warehouse or using air carrier. It focuses on the transportation and storage of incoming goods. It is important to understand who is liable to take the financial burden in these transportation when there is a voyage between a seller and buyer. The logistics looks in supply chain and specifically transportation as goods come into a company. The inbound logistics are managed more efficient the process usually. Supply chain may be fully integrated and companies will attempt to synchronize their inbound logistics with automatic ordering and order-full fill systems. The processes includes the movement of raw material, finished goods, and supplies from a manufacturer, warehouse.

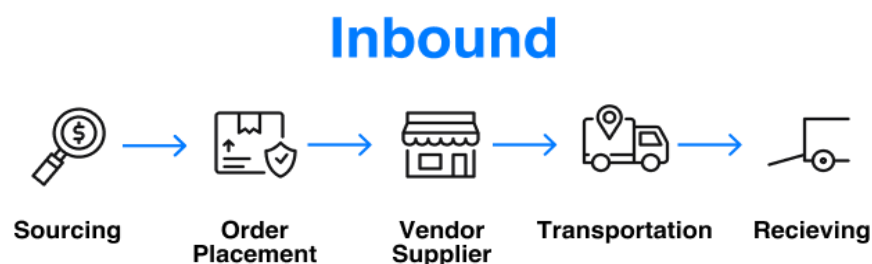


FIG:1.2 PROCESS OF INBOUND LOGISTICS

E-WAY BILLING

E-way bill is a unique bill which is electronically generated for specific movement of goods which is either in inter-state or the intra-state. The person in charge of a conveyance shall carry the bill Of supply or delivery challan bill of entry and a copy of e-way bill number generated from the common portal. Once e-way bill is generated it cannot be edited for any mistake. The logistics industry is expected to grow rapidly under the Goods and Service Tax. The implementation of the e-way bill which saves transporters both time and money.

Benefits of the e-way bill for logistics industry

- Reduced documentation
- Faster movement
- Reduced transportation costs
- Consolidated warehouses

ERP(ENTERPRISE RESOURCE PLANNING) IN LOGISTICS

Enterprise resource planning combines various applications that facilitate the flow of information within an organization making it a powerful tool for logistics. This fleet operators manage business functions like product distribution and staff maintenance and provides companies with valuable data at every stage of the supply chain.

ERP benefits logistics and transportation

- It optimizes inventory control
- It improves Distribution
- It Manages staff

R&D

In the age of rapid technology growth, developments in adhesives, sealants, encapsulants, paints & specialty coating materials are taking place all over the world to suit diversified challenging applications. In order to cope up with the advancement, Anabond Ltd has established an in-house

Anabond's ultimate vision is to become a technology originated, globally competitive company with strong support of in-house R&D. Anabond's R&D centre has been approved by Department of Scientific & Industrial Research, Ministry of Science & Technology, Government of India, New Delhi. This R&D centre was founded by Mr. J.

Vijayakumar. This centre is presently headed by Mr. K. Adhinarayanan, who has an experience of 37 years in the field of adhesives & sealants. Under him there are 23 dedicated scientists, 12 chemists and 8 supporting staff working towards developing various grades of adhesives, sealants, encapsulants, paints & speciality coating materials based on different types of polymeric systems such as epoxies, polyurethanes, silicones, acrylics, synthetic elastomers etc. The R&D centre is housed separately in a floor area of 12,500 sq.ft. The centre is fully equipped with latest testing equipments, which are required to test the various physical, mechanical and electrical properties of adhesives and sealants and related products developed in-house. A full fledged analytical facility is also available in the R&D centre to characterize the raw materials and also the intermediates developed in-house. Though the chemistries involved in the area of adhesives and sealants are very vast, Anabond's R&D centre is actively involved in the development of products based on the following chemistries for specific end applications. physical, mechanical and electrical properties of adhesives and sealants and related products developed in-house. A full fledged analytical facility is also available in the R&D centre to characterize the raw materials and also the intermediates developed in-house. Though the chemistries involved in the area of adhesives and sealants are very vast, Anabond's R&D centre is actively involved in the development of products based on the following chemistries for specific end applications.

Product Range

Di & polymethacrylate based anaerobic systems suitable for thread locking, bearing retaining, pipe sealing and liquid gasketing applications for automotive and general engineering industries.

Di & polymethacrylate based microencapsulation systems suitable for automotive and general engineering industries for thread locking applications.

Di & multifunctional epoxy based single and two part adhesives, sealants and encapsulant materials for automotive, industrial and general purpose applications.

Poly dimethyl siloxane based single and two part room temperature vulcanizing adhesives, sealants and encapsulants for automotive, engineering industries and also for general purpose applications.

Poly dimethyl siloxane based general purpose and thermally conductive greases.

Polychloroprene rubber and nitrile rubber based solvent containing adhesives, sealants for automotive, home appliances industries and also meant for general purpose applications.

EPDM, butyl rubber, cisamer, chlorobutyl and bromo butyl based caulking compounds, mastics, extruded tapes for automotive, construction and general engineering industries. Acrylic emulsion based sealants for construction industries.

Ethyl cyano acrylate based adhesives for automotive, engineering industries and also for general purpose applications. Polyester and polyether polyol based polyurethane systems for CASE, rigid and flexible foam applications for automotive, home appliances, engineering industries and general purpose applications. Paints and speciality coatings based on epoxy, polyurethane, alkyds, amino resins, nit cellulose, polyester, and thermo plastic acrylic based materials suitable for plastics, metals, wood and glass substrates for consumer, electronics, cosmetics, auto ancillary and general industries. Silver containing antibacterial glass beads for antibacterial applications. Speciality adhesives and sealant systems based on epoxies, synthetic elastomers, polyurethanes, polydimethylsiloxanes silicone systems for aerospace and defence applications. Hydroxyl / vinyl terminated polydimethylsiloxane based dental moulding compounds for dental applications. Formulation of glass – ionomers cements based on polyacrylic acid and fluoroaluminium silicate glass fillers. Formulation of light cure composite material based on BIS – GMA for dental restorative applications. High temperature (300 - 350°C) withstanding polyimide resin systems for fabricating carbon – polyimide, glass – polyimide composite components finding use in aerospace industries

LOGISTICS MANAGEMENT PRACTICES

Adebayo (2012) defined logistics management practices as a set of activities undertaken in an organization to promote effective management of its logistics. Logistics management organizations are tasked with the responsibility of formulating and implementing strategies that if adopted will lead to achievement of a sustained competitive advantage. Logistics refers to the flow of resources between the point of origin and the point of consumption in order to meet requirements of customers or corporations (Vikapia, 2005). The resources managed in logistics can include physical items such as food, materials, animals, equipment, and liquids; as well as abstract items, such as time and information. Logistics management is the part of

supply chain important than low product costs. Logistics professionals should think of themselves management that plans, implements, and controls the efficient, effective forward, and reverses flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customer's requirements. Logistics management plays a significant role in the success of any company's operations and has a direct impact on its bottom line. More importantly, logistics processes play a big part in customer satisfaction, which is more as a customer-facing portion of the company and strive every day to add value for their customers. Logistics management practices involve the operations that manage the inventory flow from the store's receiving dock to the point of sale passing through the stock room (store warehouse). Logistics operations include handling, ordering, arranging and processing of merchandise within the store (Samli, 2005). It involves returns from the customers as well as end of season returns from the store to the Distribution Center (DC). Logistics operational activities can be grouped into two main categories: the inbound and outbound logistics. Inbound logistics refers to the transport, storage and delivery of goods coming into a business. Outbound logistics refers to the transport, storage and delivery for goods going out of a business. Inbound and outbound logistics combine within the field of supply-chain management, as managers seek to maximize the reliability and efficiency of distribution networks while minimizing transport and storage costs. Understanding the differences and correlation between inbound and outbound logistics can provide insight for developing a comprehensive supply-chain management strategy. Companies work with different supply-chain partners on the inbound and outbound side of logistics. The inbound side concerns the relationship between companies and their suppliers, while the outbound side deals with how companies get products to their customers. Regardless of the source or destination, companies may work directly with third party distributors on either side as well (Olfa, 2012).

OPERATIONAL PERFORMANCE

Operational Performance refers to the measurable aspects of the outcomes of an organization's process, such as reliability, production, cycle time, and inventory turns (Voss, Ahlstrom & Blackmon, 2013). Operational performance is used to assess the success of an organization. The operational performance systems used must be relevant and appropriate to the strategies and competitive environment of the organization (Kennerly & Neely, 2003). Operational performance gets its importance

from its involvement in recurring activities to establish organizational goals, monitor progress towards the goals, and make adjustments towards achieving those goals more effectively and efficiently. It affects business performance measures such as market share and customer satisfaction (Voss, Ahlstrom & Blackmon, 2013). Logistics management practices improve operations performance by cutting down logistics cost, thereby enabling them to offer their products and services at more competitive rates to beat the stiff competition (Qureshi, Dinesh & Pradeep, 2007). Logistics management practices are strategically selected to enable create product differentiation by providing flexibility, speed with minimal holding off in a logistical supply chain. A model was proposed for the study, where logistics management, comprise inbound logistics, and outbound logistics served as the independent variable logistics practices because of internal and external pressures.

1.4 NEED FOR THE STUDY

- It needs to analyze new and cost effective way in manufacturing or providing services.
- It improves productivity and enhance employees mood.
- To analyze company's resources in a effective manner.
- The optimum utilization of workers and other resources at a minimum cost.
- To study the work process and propose work together.
- It has the focus on product and manufacturing system of the company.

1.5 SCOPE OF THE STUDY

- The scope for the field is increasing with supply chain.
- It has a huge field with tremendous opportunities for talented and energetic candidates in India.
- It also growing faster than the overall economy of the company
- The company can recognize the importance of efficiencies in the transportation and distribution.
- It can offer exciting challenges and opportunities along with the excellent remuneration.
- The success is seems to depend on effective IT support and transportation in logistics.

1.6 OBJECTIVES OF THE STUDY

1.6.1 PRIMARY OBJECTIVES

- To study the logistics management practices implemented in AnabondLtd Chennai.

1.6.2 SECONDARY OBJECTIVES

- To find the relationship between organization performance and logistic performance.
- To find out the operation performance of company.
- To understand the logistic management practices and its implementation of a company.

1.7 LIMITATIONS OF THE STUDY

- The study is only for the company confined to a particular location and a very small sample of respondents.
- Respondents may give biased answers for the require data, some of the respondents did not like to respond.
- Due to Time constraint (3 months) study was limited to some scope.
- The limited accuracy of results due to the response quality.

CHAPTER 2

REVIEW OF LITERATURE

Tibben-Lembke (2002) describes the three generic strategies for competing in the marketplace as low-cost leadership, differentiation and focus. One avenue of creating a competitive advantage with differentiation is through building a brand reputation. An organization may choose to focus on implementing logistics management practices to expose the negative environmental performance organization can cut a niche for its products. Developing and implementing logistics management practices can only be achieved through creating environmentally responsible policies and investing in the necessary equipment and training. Creating a competitive advantage through implementing reverse logistics practices would lead to improved market share and consequently higher profit margins (Fortes, 2009).

Barney (1991) resources can be classified into organizational capital resources, physical capital resources and human capital resources. Capabilities can be defined as the skills a firm needs to take full advantage of its assets. Capabilities are complex bundles of individual skills, assets and accumulated knowledge exercised through organizational processes that enable firms to co-ordinate activities and make use of their resources (Olavarrieta&Ellinger, 1997).

SmeltzerandNarasimhan (2000) observed, companies institutionalize reverse logistics practices due to fear of loss of their market share to competitors and also awareness of the consequences of non- compliance with environmental imperatives. This is over and above growing demand of customers and environmental societies for more environmentally friendly products

TritosLaosirihongthong(2013)Organizations act in a way that fulfills both customer and legal requirement. Pressures from these two parties influence the adoption of environmentally responsible behavior Organizations have institutionalized reverse logistics practices because of internal and external pressures.

DiMaggio and powell(1983)These challenges and pressures push firms to seriously considering environmental impacts while doing their business. Managerial decisions to adopt environmental management initiatives maybe influenced by three institutional mechanisms: normative, coercive and mimetic . Due to normative

pressures, such as customer requirements, organizations are forced to conform to be perceived as more legitimate. Several external stakeholders can also impose coercive pressures on companies, depending on their power. Government bodies may for instance affect the adoption of environmental practices by firms by means of stringent environmental regulation. Managers may also institute environmental practices as a strategy to mimic and outperform competition whose environmental responsibility has earned them a competitive edge (Zhu et al., 2007). One of the propositions of a unified theory of logistics is that competitive advantage goal of the firm is to continuously create customer value to satisfy end users. A review of the theories of the firm leads to the conclusion that the role of logistics is to provide the boundary-spanning, demand and supply coordinating capabilities the firm needs to create customer value to satisfy customers. The logistics contribution to the firm's competitive advantage is significant in both efficiency (cost leadership) and effectiveness (customer service). Logistics capabilities for competitive advantage include demand-management interface capabilities (customer service and logistics quality), supply-management interface capabilities (low cost supply and distribution), and information management capabilities (information sharing via information technology and connectivity).

Mentzer et al(2001) Logistics capabilities also play an important role in boundary-spanning interfaces between internal functional areas and between the focal firm and supply chain partners. Coordinated with the marketing function, logistics can differentiate product and/or service offerings to fulfill unique customer requirements. When joined with production, logistics offers cost and investment reductions while maintaining service levels. Logistics capabilities also help the firm cooperate with supply chain partners (i.e. suppliers, distributors, and other intermediaries) in coordinating supply and demand flows to deliver customer value and, in return, in sharing benefits. Thus, logistics is an integral part of the larger concept of supply chain management.

Samli's et al(2005) Retail's logistics, particularly in-store logistics operations, determine for a large part the interaction between a customer and the retail servicescape leading to a "cognitive evaluation of the service experience" (Sandstrom, Edwardson, Kristensson, & Magnusson, 2008). Stores can differentiate their offerings by streamlining the shopping experience and making customer's use of the service more convenient and satisfactory (Sandstrom et al., 2008).

Rafiq and Jaafar(2007) When customers decide where to shop or whether to return to a retailer, the quality of logistics services was found to be an important factor with timeliness, availability, and delivery conditions creating value for customers and functioning as criteria for customer evaluations of logistics operations. Logistics can directly convey value to the customer in terms of convenience and time saving, through an effortless interaction with the retail servicescape.

Ballou(2003) Logistics management practices comprised of the core practices and the support practices. The core practices are customer service, inventory management, transportation, and information flow. The related practices that support the core practices include, but not limited to, warehousing.

Order processing is the term used to identify the collective tasks associated with fulfilling an order for goods or services placed by a customer and it formed the basis for the information flow in a logistics system (**Christopher, 2010**). It had three principal functions that is create a flow of information that preceded the goods, accompanied them and followed them (Christopher, 2010). The importance of accurate information to achieving superior logistical performance had historically been underappreciated. While many aspects of information were critical to logistics operations, the processing of orders was of primary importance (Bowersox, et al., 2010). Failure to fully comprehend this importance resulted from not fully understanding how distortion and operational failures in order processing impact logistical operations (Bowersox, et al., 2010).

Stevenson(2009) Order processing is the term used to identify the collective tasks associated with fulfilling an order for goods or services placed by a customer.

Lysons and Farrington(2012) Inventory management practices provide for the upstream and downstream inventory visibility in the logistics or supply chain system. The aim of inventory is to provide both internal and external customers with the required service level, ascertain the present and future requirement for all types of inventory, keep costs at minimum and provide for the. In the firm, all inventory policies must be of benefit by driving period operating expenses and working capital requirements. To measure the effective and efficient performance of inventory depends on to what extent the firm has the right quantity of inventory in the right place and at the right

time. The indicators to measure such inventory are the lead time, the service time (safety stock), the rate of stock turn, stock outs in a given period and stock cover.

Wisner et al(2011)Transportation has the overriding objective that moves the cargo from point A to point B. Transportation is a vital strategic link between firms in a supply chain and must be managed effectively to meet customer due date and other shipping requirements at a reasonable cost . In logistics it is transportation that provides the flow of materials, products and persons between productions facilities, warehouses, the distribution centers, the terminals and the customers. Transportation is the only activity that provides the time and place utilities through the outbound and inbound logistics. An inefficient transportation system may lead to the firm incurring high cost to deliver product to customer, and this may lead to loss to the firm; and the transport system must be able to address the major issues of the mode selection, route selection and fleet size because it is the vital force for competition for the firm. According to**Nowakowska and Grunt (2007)** the effective functioning of logistics information system requires the use of hardware and technology transfer; and the information system must be customized to serve the logistics system effectively to enhance the line of communication With the emergence of ICT, information flow provides a special advantage to link one activity with the others and make real-time data created in activity widely available, both within the firm and with outside suppliers, channels, and customers. For information flow to be effective and efficient

it must enhance the firm's logistics by planning, controlling, coordinating and monitoring the logistics process.

Pienaar and Voght(2006)Warehousing includes space determination, stock layout, configuration, and stock placement. In logistics; delivering the right product in the right quantity relies on warehousing picking and dispatching accurately. Warehousing ensures that products are delivered to the right customer at the right place, on time. It also ensures cost efficient operation by delivering the product at the right price, and in perfect order and condition proposed that effective customer service depends on the firm warehousing operations. Warehouse has three operational functions of the firm; the function that receives and transfer customer orders, the information transfer function that ensure the use of technology for

warehousing efficiency and the storage function that store product temporarily or permanently.

Pfohl(2004)In logistics, packaging activities are responsible for designing, handling, storage and protection from loss and damage. Products are packaged to serve the marketing need of branding and promotional purposes, whereas protection from loss and damage requires the packaging to enable the product to reach its required destination in the right condition. Packaging must be seen as a coordinated system that support logistics by preparing the product for secure, efficient and effective handling, transport, distribution, storage retailing, consumption and recovery, reuse or disposal to meet the customer value. Packaging supports logistics through protection, storage, transport, information and handling of the product and the correct design of the packaging can lead to the overall low logistics costs or supply or service delivery. Operational performance relates to the firm's capabilities to more efficiently produce and deliver products to customers. It refers to the strategic dimensions by which a company chooses to compete. There seems to be a universal agreement in literature that quality, delivery, flexibility and cost are the core and most often mentioned operational performance areas. With regard to cost, customers' support for product acquisition facilitates product return for recycling processes of manufacturers.

Vachon and Klassen(2008)Quality refers to the ability of product or service to consistently meet or exceed customer expectations. Quality means getting what you pay for. In terms of quality, logistic management with customers led to product-based performance in the form of conformance to specifications and durability found that logistical management cooperation with customers is significantly and positively associated with greater quality improvement. If quality performance is manufacturing's primary strategic objective, then logistic management with customers can offer a further synergistic mechanism to achieve competitive quality gains With regard to flexibility and delivery, Vachon and Klassen further identified a positive relationship between logistic management with customers and flexibility, but environmental cooperation with customers becomes insignificant when upstream collaboration is introduced in their model.

Pagel and Krause(2002)Companies should integrate environmental aspects into both product and process design in order to respond to customer demand. Logistic

management with customers helps firms to integrate technological organizational innovations, thus providing for simultaneous improvements in operational performance. Environmental cooperation with customers usually generates benefits in terms of cost, quality, flexibility and delivery/time (Klassen&Vachon, 2003).

Waweru et al. (2015) opined that to gain superior performance, the logistics management or supply chain management must have the ability to meet customer satisfaction, response to customer complaints, deliver on timely basis, have a fill rate, stock-out probability and accuracy. The Japan Institute of Logistics System (2011) argued that, logistics management is an enhancement of corporate superior performance and for management, logistics as a management strategy is required to contribute to gain profits. Chan (2003) opined that the quality performance of a firm logistics management or the supply chain management are determined by qualitative factors of customer complaints, customer response time, on time delivery, leadtime.

Rushton et al(2006) Logistics affects many procedures and activities in a business, bad logistics management leads to increasing operational costs and decreased customer service. Logistics interferes with many business areas and, thus it is suggested to identify and determine service cost trade-offs in order to provide positive benefits to the logistics system as a whole. A study done by Bailey et al. (2005), suggest that increasing global competition is changing the environment facing most companies today. For them, as trade barriers fall and transaction costs decline, new global competitors are entering previously more isolated domestic markets. In response to this intensified competitive pressure, local companies are pushed to enhance their performance by innovating and adopting process and product improvements (**Panjehsouladgaran et al., 2010 and Ian, 2005**).

Olavarrieta and Ellinger (2004) argued that in a turbulent and dynamic environment, firms must have agility in the market place to survive and succeed, and logistics has become an increasing area of strategic concern for firm performance, and important source of sustainable competitive advantage (SCA). Their finding was that a firm must combine its logistical resources (Input, Assets and Capabilities, its strategic resources) and organizational learning (information acquisition, information distribution, information interpretation and knowledge storage) to gain a relative superior performance. Wisner et al. (2011) posit that for the supply chain or the logistics system to stay performing, costs management and containment must be an

ongoing concern while also customers must be satisfied with the products and services they are purchasing. In recent years, logistic management has evolved as the intra and inter-firm management of the upstream and downstream supply chain, which has the capability to cut the overall environmental impact of both the forward and reverse flows (Klassen&Johnson, 2004).

Thun and muller(2010)companies are Suppliers, manufacturers, customers and disposal companies must be incorporated in implementing logistic management practices. Previous studies exploring ecological initiatives have focused primarily on selected functional areas (Rao& Holt, 2005). The incomplete and developing conceptualizations have generated unconvincing results about the relationship between logistic management practices and firm performance (Zailani et al., 2012)

Rao and Holt(2005)to explore the conceptualizations of logistic management practices and its impact on performance, there is a need to investigate how individual dimensions of logistic management are related to selected dimensions of operational performance. In order to fully understand logistic management, it is important to focus logistic management study on the totality of the supply chain from both upstream and downstream sides and internal processes).Cross-functional integration within a firm and integration with suppliers and/or customers on implementing environmental management practices is required to achieve sustainable firm performance (Vachon&Klassen, 2006).

Eltayeb, Zailani and Ramayan(2011)Many organizations the world over have been forced to adopt reverse logistics practices in order to conform to set environmental regulations. Recently however, several voluntary reverse logistics programs have been adopted by organizations in order to reduce the pressure for new or expanded legislation. Many organizations have tried to improve their own performance and others by having their industry association impose more stringent requirements on its entire membership. This is all in a bid to avoid the consequences of non-compliance which include heavy financial penalties and / or withdrawal of licenses.

Bowersox and closs(1996) Advanced information system as well as third-party logistics are functions of logistic services. In recent years the functions of logistics services have expanded from marketing and manufacture to warehousing, transportation activities, purchasing, distribution, inventory management, packaging and customer services which summarized the logistics services integrated. Apart

from abundant service function, the relationship between clients and logistics service providers evolved from tactic solution of cost reduction to strategic alliance (Chapman et al., 2003; Langley et al., 2005)

Gronroos (2000) The competition nowadays is focused more on the basis of service not on the basis of physical products. As the cost and efficiency of logistic services grow to have greater impact on economic activities. Since third-party logistics is a more familiar concept.

Lied and Miller (2002) Third-party logistics providers are companies that offer complete or partial logistics services for their customers through years of development third party logistics provider is accepted by most of business there are surveys which exposed that 77 percent of fortune manufactures employ multiple providers for various kinds of services. The companies that using third-party logistics half of been using the services for more than 5 years.

CHALLENGES

Like any other field of study, logistics and logistics management practices are also affected by challenges that see firms experiencing difficulties while providing products and services to end customers. While some of these challenges have a long service effect on the performance of the firm and need overtime strategic efforts to deal with them there are other challenges that the firm will require a rapid approach to address them. Logistics management is a customer focus management; that is logistics efforts must lead to customer satisfaction and it is this customer satisfaction that remains a high challenge for firms. According to Wisner et al. (2011) customer satisfaction is determined by the level of customer service; and the challenges is the focus on how to avoid a misstep in providing the right product, in the right quantity, in the right condition, at the right place, at the right time, for the right customer and at the right cost. The World Bank Group (2005) and World Bank Group (2014) reported that improving logistics performing in low income countries mean reforming custom agencies and making investment in logistical infrastructures. **Vogt and Pienaar (2006)** posit that many firms are faced with the challenge of how logistics interface with the production and marketing functions to achieve the firm objectives. Marketing means selling and production means making something, and it is logistics activities that must take place between the point and times of production or purchase and the points and times of demand, and they affect the efficiency and

effectiveness of the two functions. For example, different operating objectives between marketing and production/operations in the form of maximizing revenue versus minimizing cost may lead to fragmented interest that may subsequently lead to lower customer service or higher total logistics costs. Costs trade-off (place decision, price decision, product decision and promotion decision) between the marketing and logistics functions are other challenges that firms must address. For example, a firm will not be profitable and grow if there is a waste in the logistics system that results to the high price of product, since the costs of product cover the relevant costs of production, marketing, distribution and general administration.

CHAPTER 3

RESEARCH METHODOLOGY

Research Methodology is a common parlance refers to a search for knowledge. Research is an art of scientific investigation. It can also define as the scientific and systematic search for pertinent information on a specific topic. In research methodology section allows the reader to critically evaluate a study's overall validity and reliability

3.1 RESEARCH DESIGN

“A research design is the arrangement of conditional for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure”. Research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data. The type of research design used in the project was descriptive research, because it helps to describe a particular situation prevailing with in a company. Careful design of the descriptive studies was necessary to ensure the complete interpretation of the situation and to ensure minimum bias in the collection of the data.

3.2 SAMPLING TECHNIQUE

Sample Unit: Middle Level Managers and Supervisors of Anabond Ltd (Including Dealers)

Sample Size: 120

Population size: 250 (Including all supervisor level)

3.3 SOURCES OF DATA

Both the primary and secondary data collection methods were used in the project. First time collected data are referred to as primary data. In this research the primary data was collected by means of a structure a questionnaire. The questionnaire consisted of a number of questions in printed form. It had both open-end, closed-end questions in it. Data which has already done through the process of analysis are

where used by someone else earlier is referred to secondary data. This type of data was collected from the books, journals, company records etc

3.3.1 *Primary Data*

Primary data are those, which are collected as a fresh one and for the first time and this happen to be original in character. These data are one which is collected only for the researcher directly by survey among the customer.

3.5.2 QUESTIONNAIRE METHOD

Data is collected through questionnaire method.

3.5.3 *Secondary Data*

Secondary data are collected from the company, records and magazines. It has been compiled from the report and official publication of the organization. This has helped getting an insight of the present scenario exiting in the operation of the company.

3.6 SAMPLING TECHNIQUE

3.6.1 *Convenience Sampling Method*

This convenience sampling method is adopted due to the convenience of staff the data was collected.

3.7 PERIOD OF STUDY

The period of study is from 1st February 2021 to 28th February 2021 which is one month of study.

3.8 TOOLS USED FOR ANALYTICAL

- Percentage analysis.
- Chi-Square test
- ANOVA test
- RANK Correlation test

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

4. 1 PERCENTAGE ANALYSIS

Table No 4.1.1:Table showing Age of the respondents

S No	Particulars	No of Respondents	Percentage
1	18-30	18	15.0
2	31-40	63	52.5
3	41-50	30	25.0
4	51-58	9	7.5
Total		120	100.0

Source : Primary data.

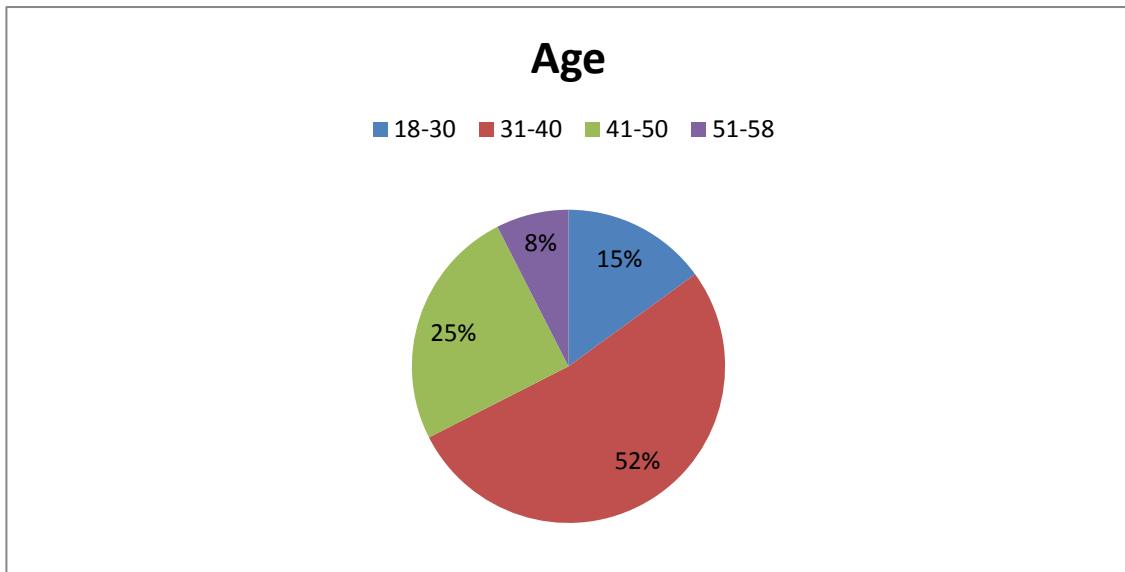


Chart No 4.1.1:Chart representing the Age of the respondents

INTERPRETATION

From the above table 15% respondents are 18-30 age group, 52.5% respondents are 31-40, 25% are 41-50 age group and 7.5% of the respondents are 51 -58 age group.

INFERENCE

Majority of the respondents are from the age group of 31-40 which they are 52.5%.

Table No 4.1.2:Table showing Gender wise classification of the respondents

S No	Particulars	No of Respondents	Percentage
1	Male	81	67.5
2	Female	39	32.5
Total		120	100.0

Source : Primary data.

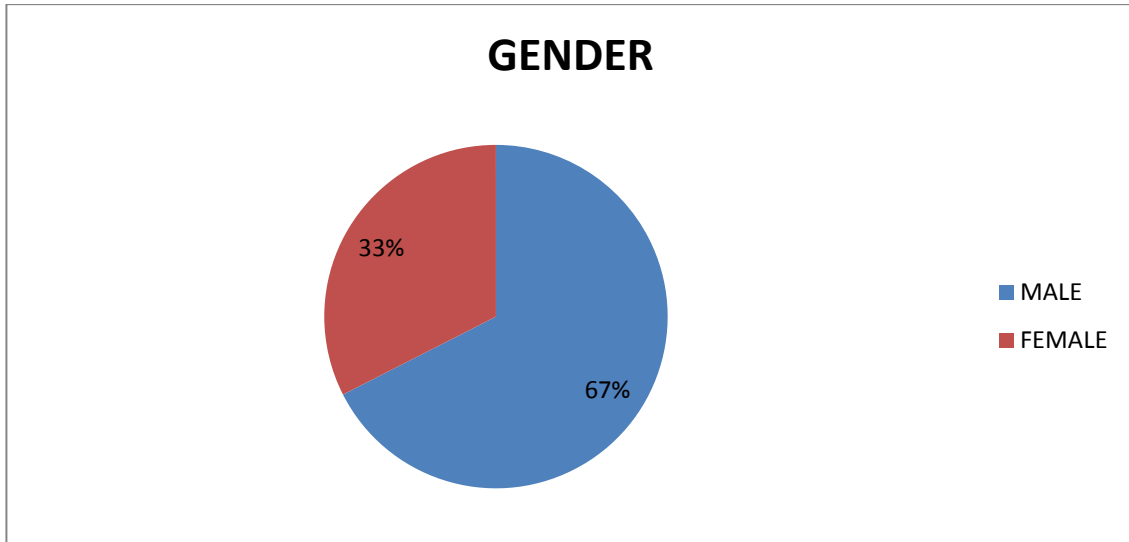


Chart No 4.1.2: Chart representing Gender of the respondents

INTERPRETATION

From the above table, respondents are 67.5% are Male and rest of 32.5% of the respondents are Female according to the Gender.

INFERENCE

Majority of respondents are Male which they are 67.5%

Table No 4.1.3:Table showing Designation of the respondents

S No	Particulars	No of Respondents	Percentage
1	Assistant Manager	6	5.0
2	Manager	24	20.0
3	Other categories	90	75.0
Total		120	100.0

Source: Primary data.

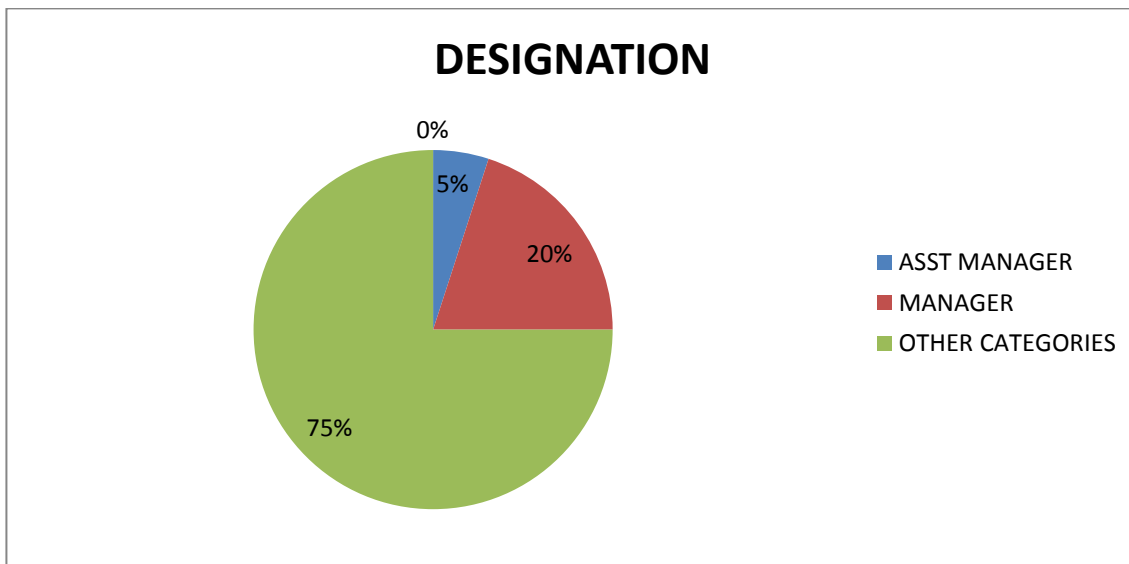


Chart No 4.1.3: Chart representing Designation of the respondents

INTERPRETATION

From the above Designation table, 5% of respondents are comes under Asst Manager category, 20% are Managers and 75% of respondents are from other categories.

INFERENCE

Majority of the respondents designation are higher in other categories which is 75%.

Table No 4.1.4: Table showing Monthly Income of the respondents

S No	Particulars	No of Respondents	Percentage
1	15000-25000	30	25.0
2	25000-35000	60	50.0
3	35000-45000	15	12.5
4	Above 45000	15	12.5
Total		120	100.0

Source: Primary data.

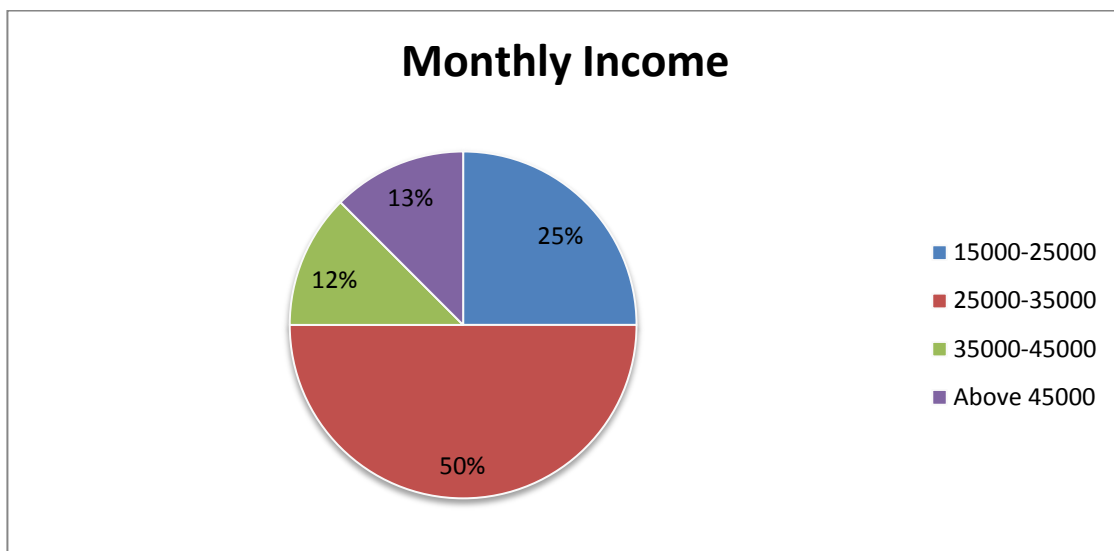


Chart No 4.1.4: Chart representing Monthly Income of the respondents

INTERPRETATION

From the above table, 25% of respondents are getting pay between 15000-25000, 50% respondents are 25000-35000, 12.5% respondents 35000-45000, and 12.5% are above 45000.

INFERENCE

Majority of the respondents are getting a pay between 25000-35000 which is of 50%.

Table No 4.1.5: Table showing Assurance for effective moment to the respondents

S No	Particulars	No of Respondents	Percentage
1	Transportation	57	47.5
2	Eway Billing	39	32.5
3	Tracking orders	24	20.0
Total		120	100.0

Source: Primary data.

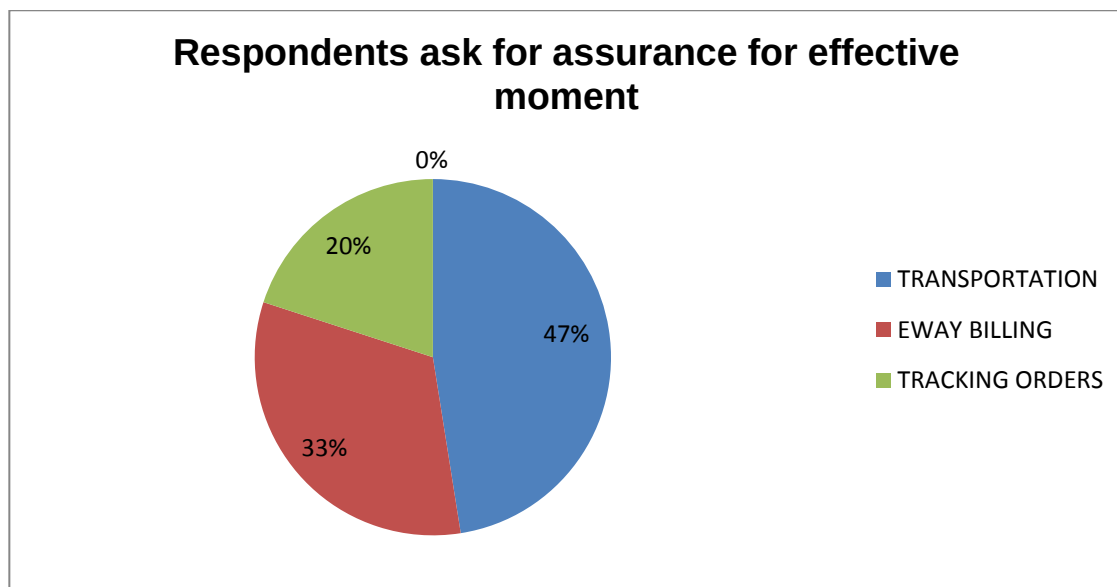


Chart No 4.1.5:Chart representing Assurance for effective moment of the respondents

INTERPRETATION

From the above table, respondents are assuring effective movement by 47.5% are transportation, 32.5% of Eway billing and 20% of tracking orders.

INFERENCE

Majority of the respondents assuring the effective moment in the transportation which is 47.5%.

Table No 4.1.6:Table showingEffective tracking means of the respondents

S No	Particulars	No of Respondents	Percentage
1	Ordering Date	30	25.0
2	Shipment Date	42	35.0
3	Middle of the delivery	18	15.0
4	Delivering Date	30	25.0
Total		120	100.0

Source: Primary data.

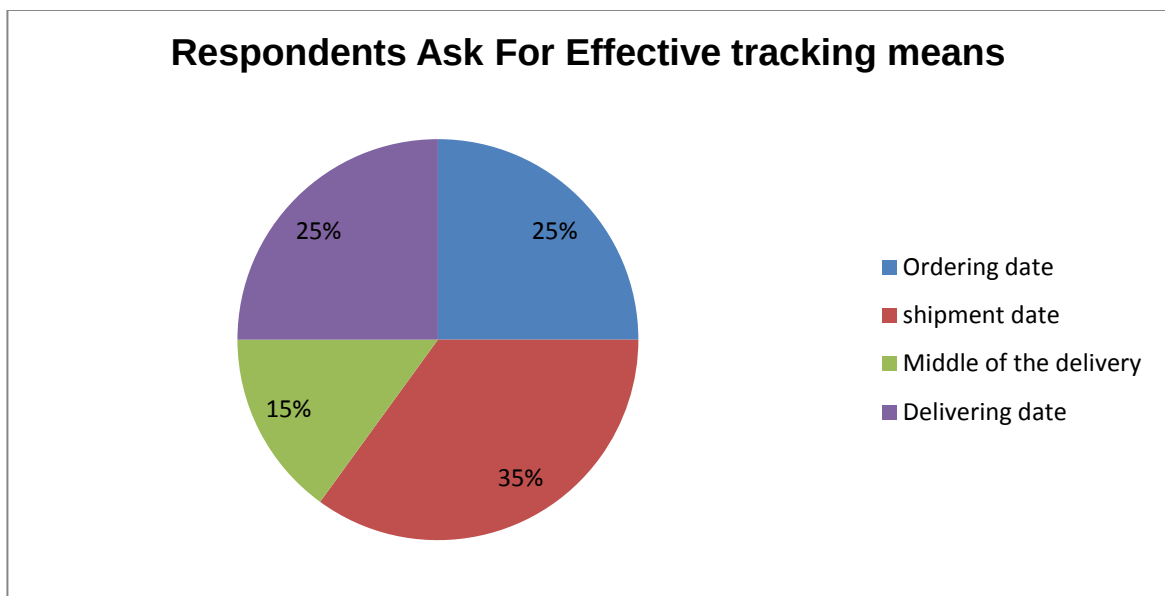


Chart No 4.1.6: Chart representing Effective tracking means of the respondents

Interpretation

From the above table of tracking means, 25% of respondents are from ordering date, 35% from shipment date, 15% from middle of delivery and 25% are from delivering date.

Inference

Majority of the respondents are assured in the tracking means of shipment date which is 35%.

Table No 4.1.7: Table showing purchase of raw material to the respondents

S No	Particulars	No of Respondents	Percentage
1	Strongly Agree	60	50.0
2	Agree	39	32.5
3	Neutral	21	17.5
4	Disagree	0	0.0
5	Strongly Disagree	0	0.0
Total		120	100.0

Source: Primary data.

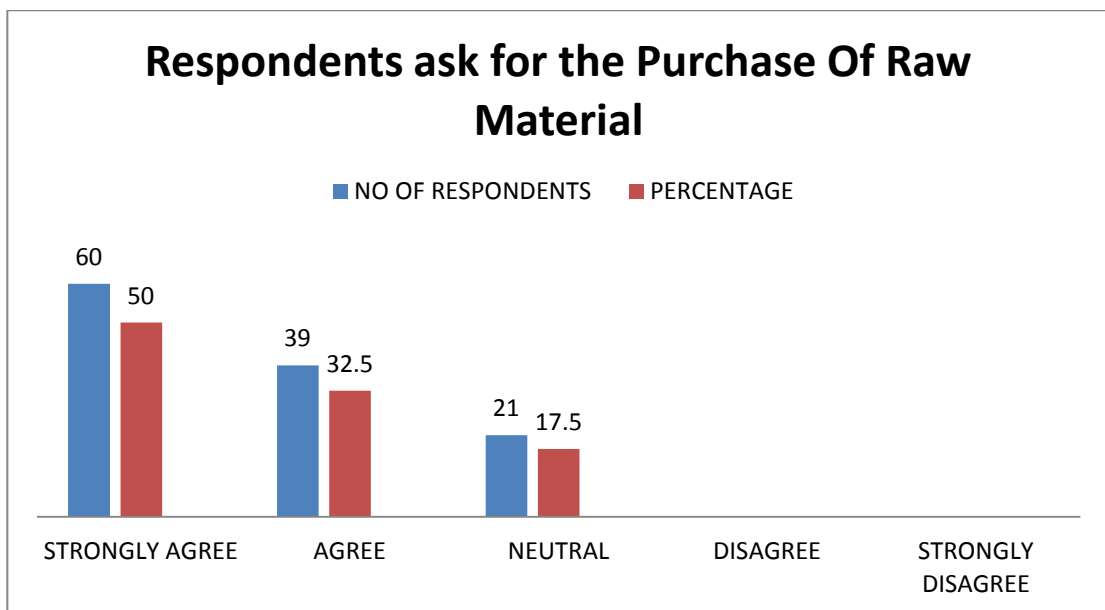


Chart No 4.1.7: Chart representing Purchase of raw material to the respondents

INTERPRETATION

From the above table, purchase of RM based on requirement are mentioned according to respondents 50% of SA, 32.5 of A and 17.5 are N.

INFERENCE

Majority of 50% respondents are strongly agree for the purchase of raw material.

Table No 4.1.8: Table showing Raw material best quality to the respondents

S No	Particulars	No of Respondents	Percentage
1	Strongly Agree	33	27.5
2	Agree	48	40.0
3	Neutral	39	32.5
4	Disagree	0	0.0
5	Strongly Disagree	0	0.0
Total		120	100.0

Source: Primary data.

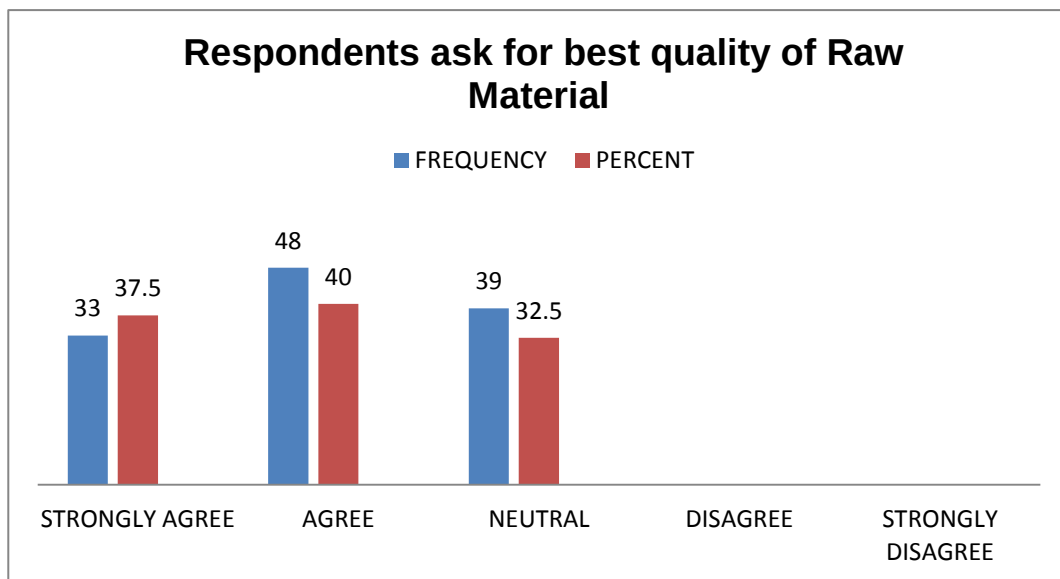


Chart No 4.1.8: Chart representing Raw material best quality of the respondents

INTERPRETATION

From the table, RM quality are came under respondents percentage of 27.5% of SA, 40% of A and 32.5% of N.

INFERENCE

Majority of 40% of the respondents are Agree on the best quality of raw material.

Table No 4.1.9: Table showing Raw material delivered on time to the respondents

S No	Particulars	No of Respondents	Percentage
1	Strongly Agree	42	35.0
2	Agree	42	35.0
3	Neutral	33	27.5
4	Disagree	3	2.5
5	Strongly Disagree	0	0.0
Total		120	100.0

Source: Primary data.

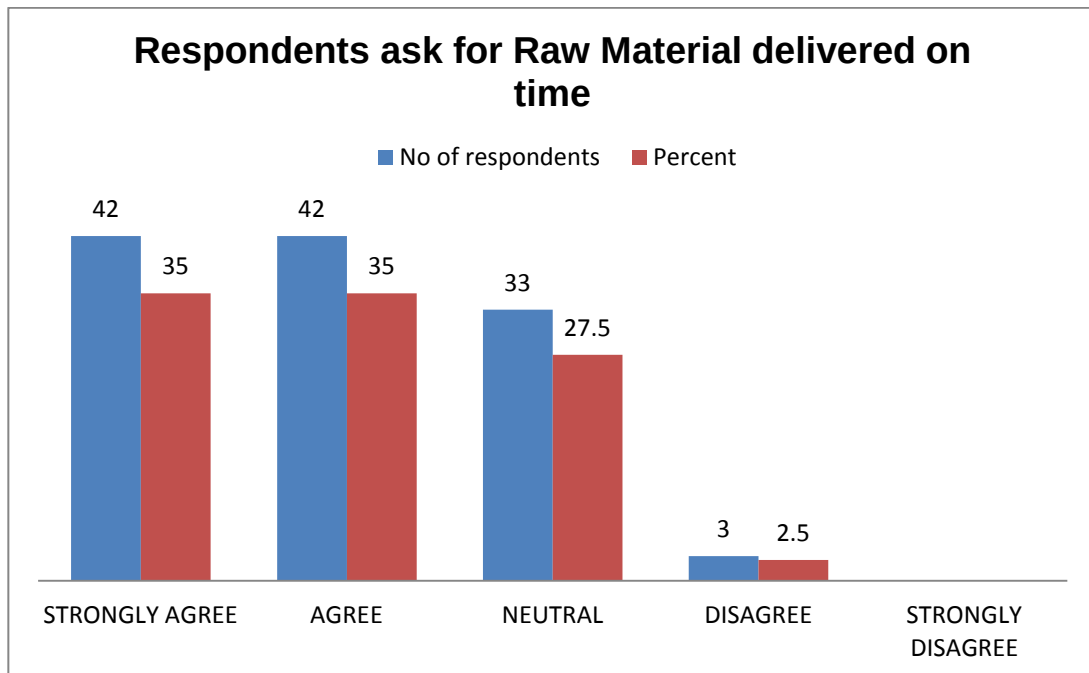


Chart no 4.1.9: Chart representing Raw material delivered on time to the respondents

INTERPRETATION

From the above table, the respondents are 35% of SA, 35% of A, 27.5% of N and 2.5 of DA are mentioned in RM delivering on time

INFERENCE

Respondents are assured strongly agree and agree in a equal part as 35% for delivery on time.

Table No 4.1.10: Table showing Effective medium of transportation of the respondents

S No	Particulars	No of Respondents	Percentage
1	Roadways	24	20.0
2	Railways	18	15.0
3	Airways	75	62.5
4	Waterways	3	2.5
Total		120	100.0

Source: Primary data.

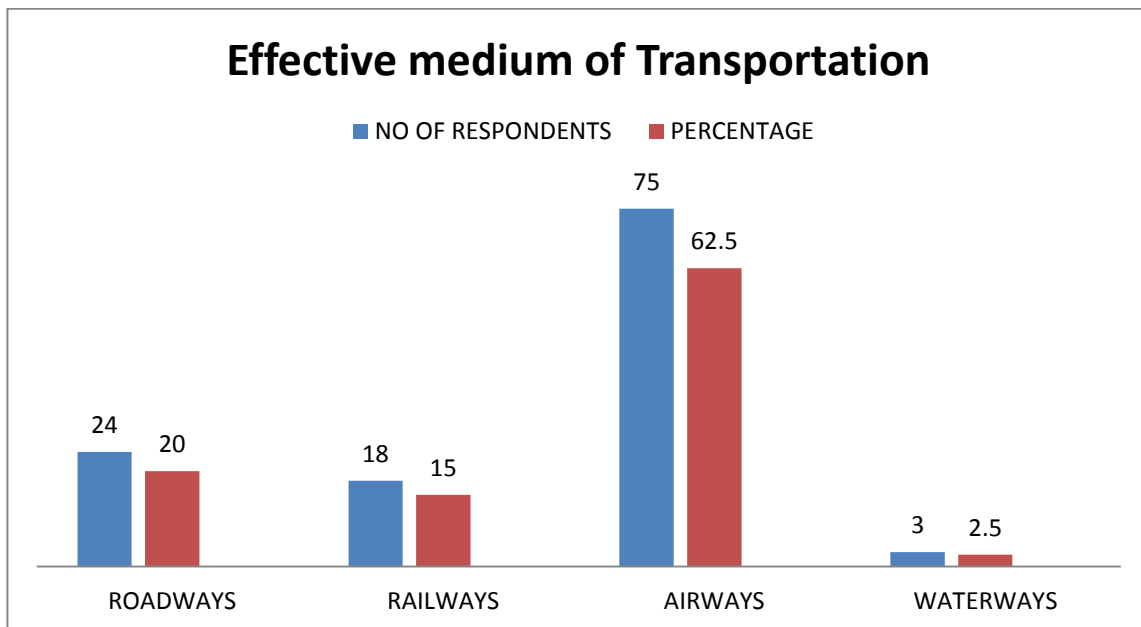


Chart No 4.1.10: Chart representing effective medium of transportation of the respondents

INTERPRETATION

From the table, medium of transportation takes survey to the respondents according to that 20% are Roadways, 15% are Railways, 62.5 are Airways and 2.5 are only for Waterways.

INFERENCE

Majority of respondents are answered Airways is the medium of transportation which is of 62.5

Table No 4.1.11: Table showing raw material delivered on time to the respondents

S No	Particulars	No of Respondents	Percentage
1	Strongly Agree	42	35.0
2	Agree	42	35.0
3	Neutral	33	27.5
4	Disagree	3	2.5
5	Strongly Disagree	0	0.0
Total		120	100.0

Source: Primary data.

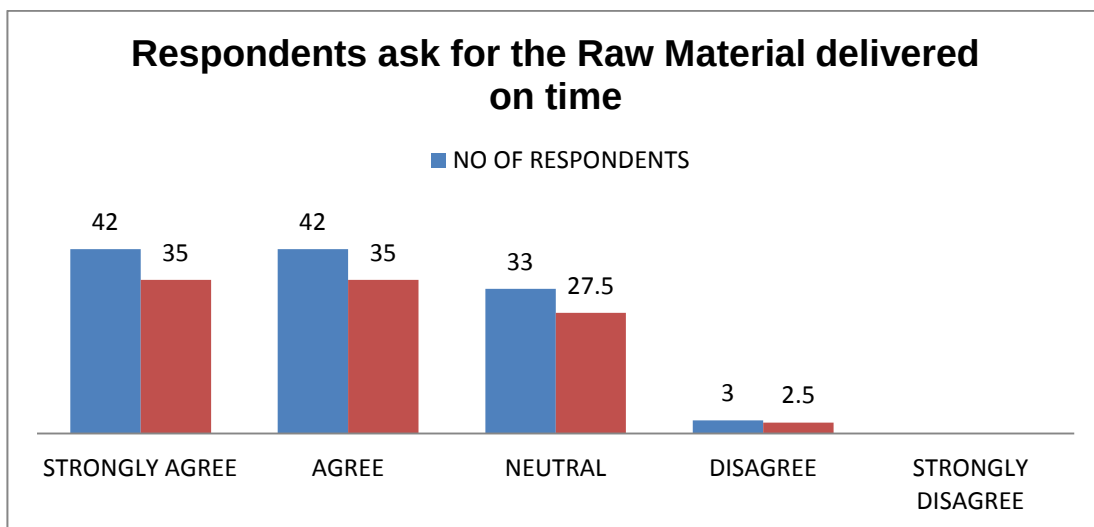


Chart No 4.1.11: Chart representing raw material delivered on time of the respondents

INTERPRETATION

From the above table, respondents are answered for delivering on time by 35% are SA, 35% are A, 27.5% are N and 2.5 are DA

INFERENCE

Majority of respondents are equally said as strongly agree and Agree in delivered on time by 35%

Table No 4.1.12: Table showing short lead time of the respondents

S NO	Particulars	No of Respondents	Percentage
1	Strongly Agree	27	22.5
2	Agree	42	35.5
3	Neutral	48	40.0
4	Disagree	3	2.5
5	Strongly Disagree	0	0.0
Total		120	100.0

Source: Primary data.

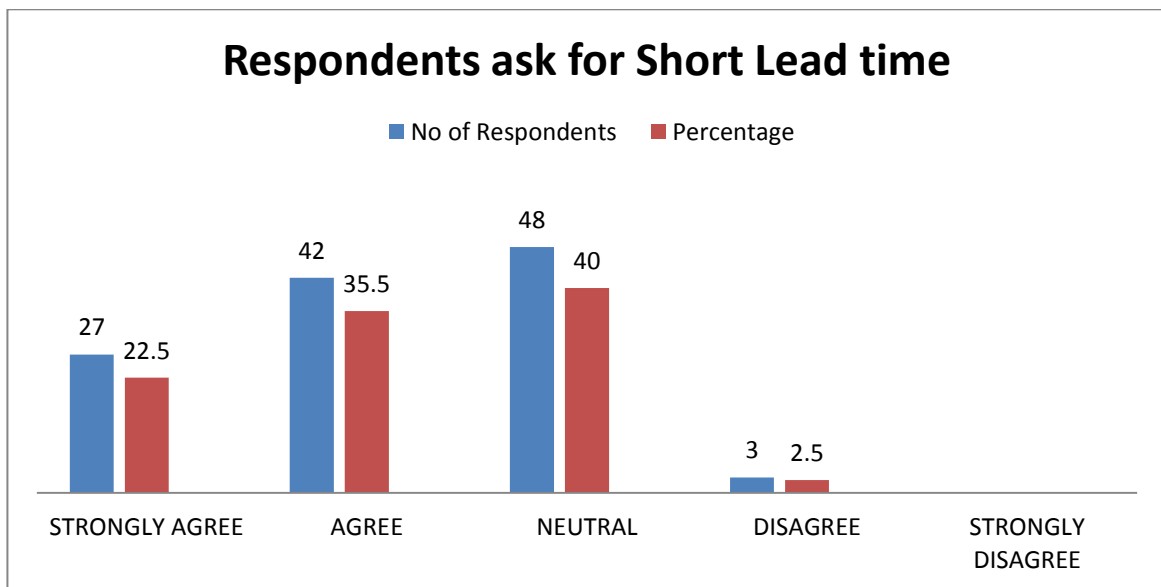


Chart No 4.1.12: Chart representing short lead time of the respondents

INTERPRETATION

From the above table ,short lead time according to the respondents are 22.5% are SA, 35.0% are A, 40% are N, 2.5% are DA

INFERENCE

Majority of 40% are Neutral by the respondents in a short lead time.

Table No 4.1.13: Table showing Less number of defects received from vendors to the respondents

S No	Particulars	No of Respondents	Percentage
1	Strongly Agree	39	32.5
2	Agree	54	45.5
3	Neutral	27	22.5
4	Disagree	0	0.0
5	Strongly Disagree	0	0.0
Total		120	100.0

Source: Primary data.

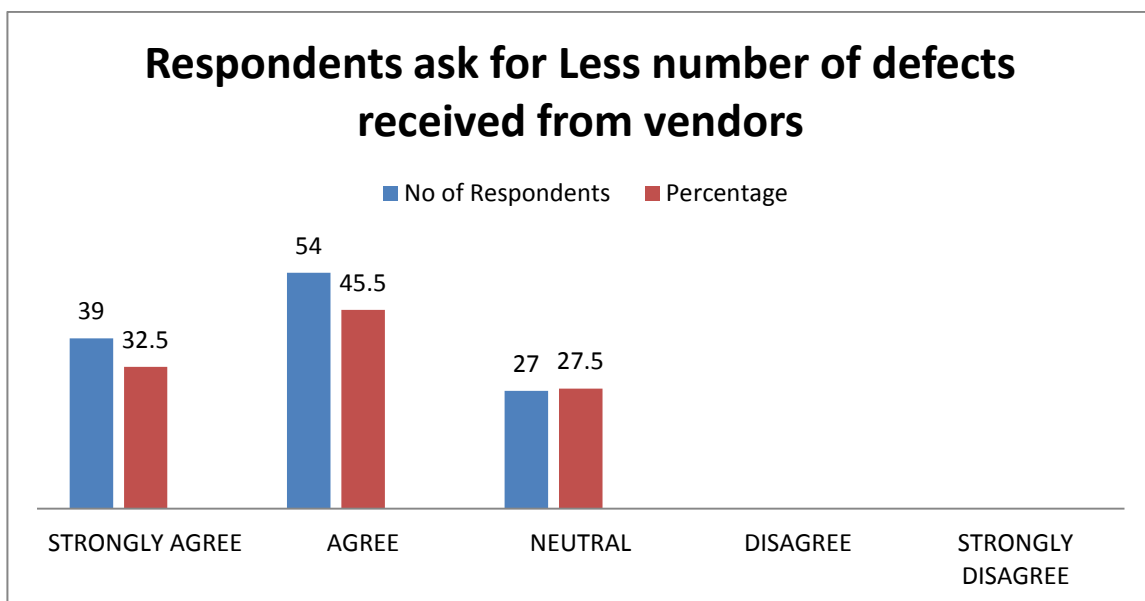


Chart No 4.1.13: Chart representing Less number of defects received from vendors of the respondents

INTERPRETATION

From the table, defects from vendors are surveyed to the respondents by 32.5% of SA, 45% of A, 22.5% of N.

INFERENCE

Majority of 45% of respondents are Agree on the defects from vendors.

Table No 4.1.14: Table showing short time to replace damage products of the respondents

S NO	Particulars	No of Respondents	Percentage
1	Strongly Agree	24	20.0
2	Agree	54	45.0
3	Neutral	42	35.0
4	Disagree	0	0.0
5	Strongly Disagree	0	0.0
Total		120	100.0

Source: Primary data.

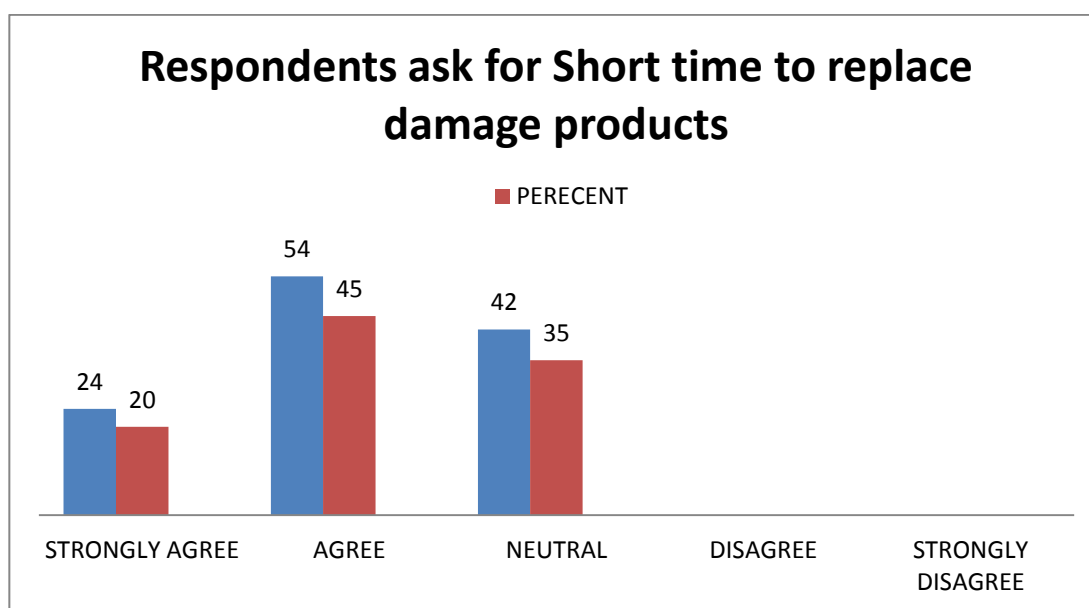


Chart No 4.1.14: Chart representing short time to replace damaged products of the respondents

INTERPRETATION

From the table .replacement of damaged products according to the respondents are 20% of SA, 45%A,35%areN.

INFERENCE

Majority of the respondents are Agree in replacement in damaged products by 45%.

Table No 4.1.15: Table showing difficult to identify damaged products to the respondents

S No	Particulars	No of Respondents	Percentage
1	Strongly Agree	66	55.0
2	Agree	54	45.0
3	Neutral	0	0.0
4	Disagree	0	0.0
5	Strongly Disagree	0	0.0
Total		120	100.0

Source: Primary data.

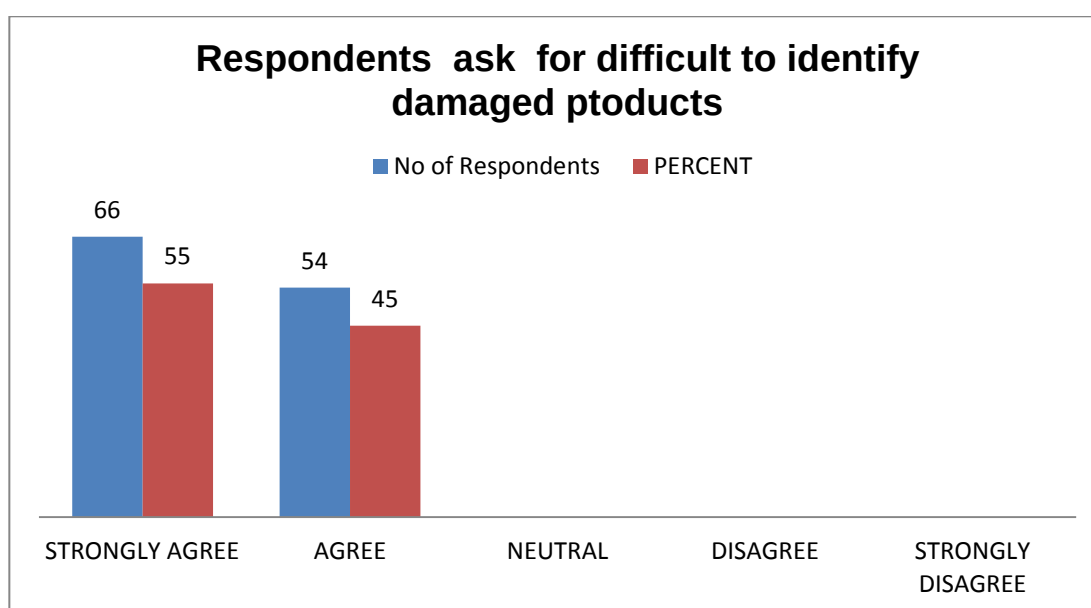


Chart No 4.1.15: Chart representing difficult to identify damaged products to the respondents

INTERPRETATION

From the above table, to identify damage products is very difficult according to respondents they are 55% of SA and 45% of A.

INFERENCE

Majority of 55% of the respondents are strongly agree in identifying damaged product is difficult.

Table No 4.1.16: Table showing implementing 3pl reduces transportation cost to the respondents

S No	Particulars	No of Respondents	Percentage
1	Strongly Agree	33	27.5
2	Agree	54	45.0
3	Neutral	33	27.5
4	Disagree	0	0.0
5	Strongly Disagree	0	0.0
Total		120	100.0

Source: Primary data.

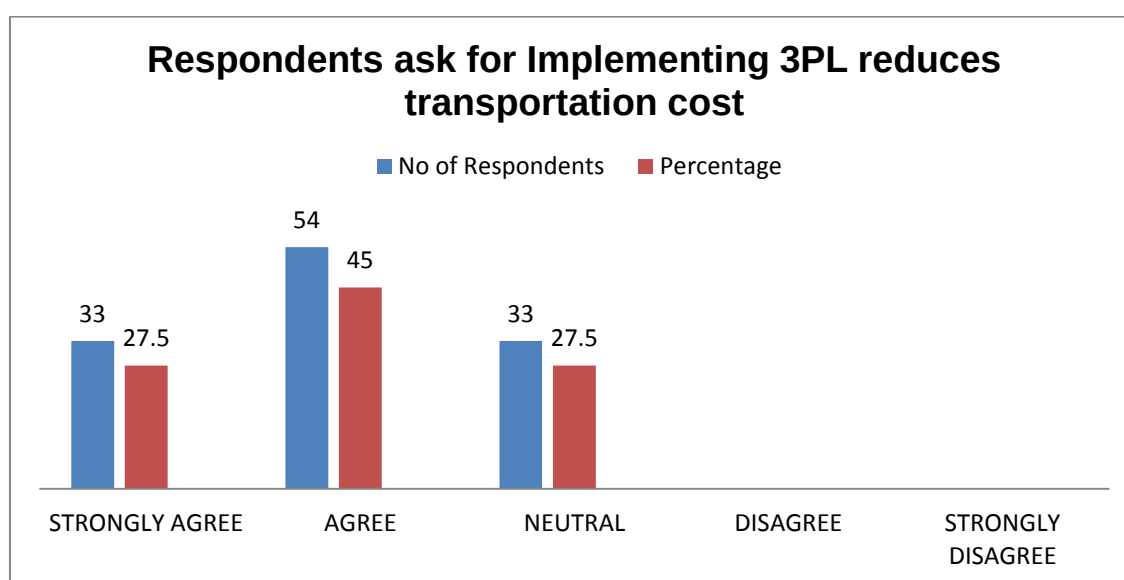


Chart No 4.1.16: Chart representing implementing 3pl reduces transportation cost to the respondents

INTERPRETATION

From the table, 3PL reduce the transportation cost according to the respondents they are 27.5% of SA, 45% of A and 27.5 of N.

INFERENCE

Majority in 3PL reduces transportation cost respondents are Agree in that by 45%.

Table No 4.1.17: Table showing implementing 3pl involves high risk to the respondents

S NO	Particulars	No of Respondents	Percentage
1	Strongly Agree	66	55.0
2	Agree	51	42.5
3	Neutral	3	2.5
4	Disagree	0	0.0
5	Strongly Disagree	0	0.0
Total		120	100.0

Source: Primary data.

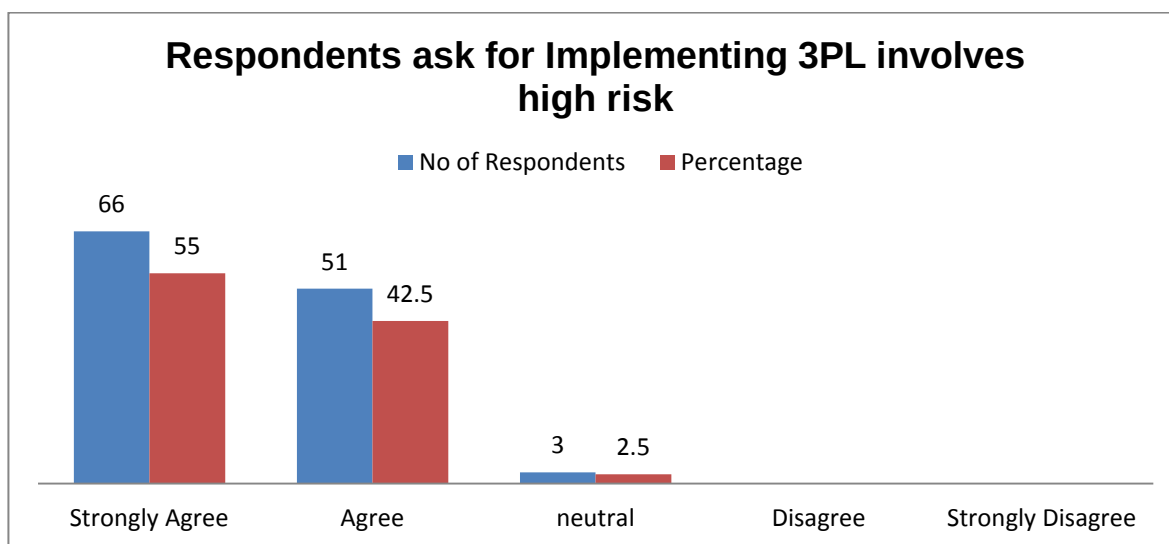


Chart No 4.1.17: Chart representing implementing 3pl involves high risk to the respondents

INTERPRETATION

From the table, 3PL involves heavy risk the respondents are 55% are Strongly agree, 42.5% are Agree and 2.5% are Disagree.

INFERENCE

Majority of 3PL involves risk by 55% of respondents are strongly Agree.

Table No 4.1.18: Table showing 3pl helps in effective transportation to the respondents

S No	Particulars	No of Respondents	Percentage
1	Strongly Agree	72	60.0
2	Agree	48	40.0
3	Neutral	0	0.0
4	Disagree	0	0.0
5	Strongly Disagree	0	0.0
Total		120	100.0

Source: Primary data.

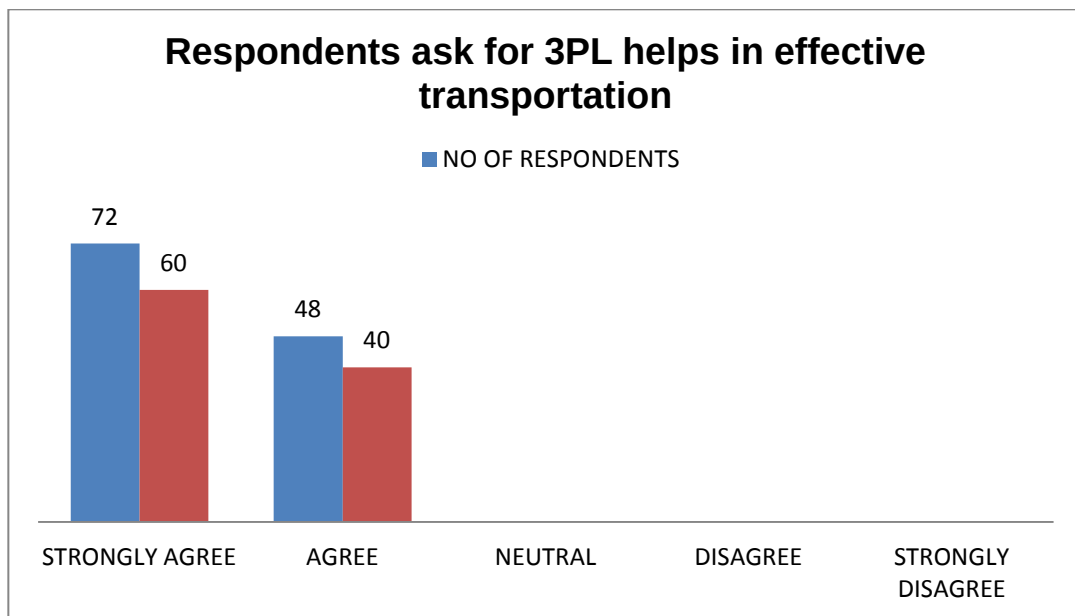


Chart No 4.1.18: Chart representing 3PL helps in effective transportation to the respondents

INTERPRETATION

From the table, transportation effective in 3PL the respondents are 60% of strongly Agree and 40% of Agree.

INFERENCE

Majority of the respondents are strongly agree on transportation effective in 3PL by 60%.

Table No 4.1.19: Table showing All stocks are properly stored in warehouse to the respondents

S No	Particulars	No of Respondents	Percentage
1	Strongly Disagree	9	7.5
2	Disagree	27	22.5
3	Neutral	15	12.5
4	Agree	69	57.5
5	Strongly Agree	0	0.0
Total		120	100.0

Source: Primary data.

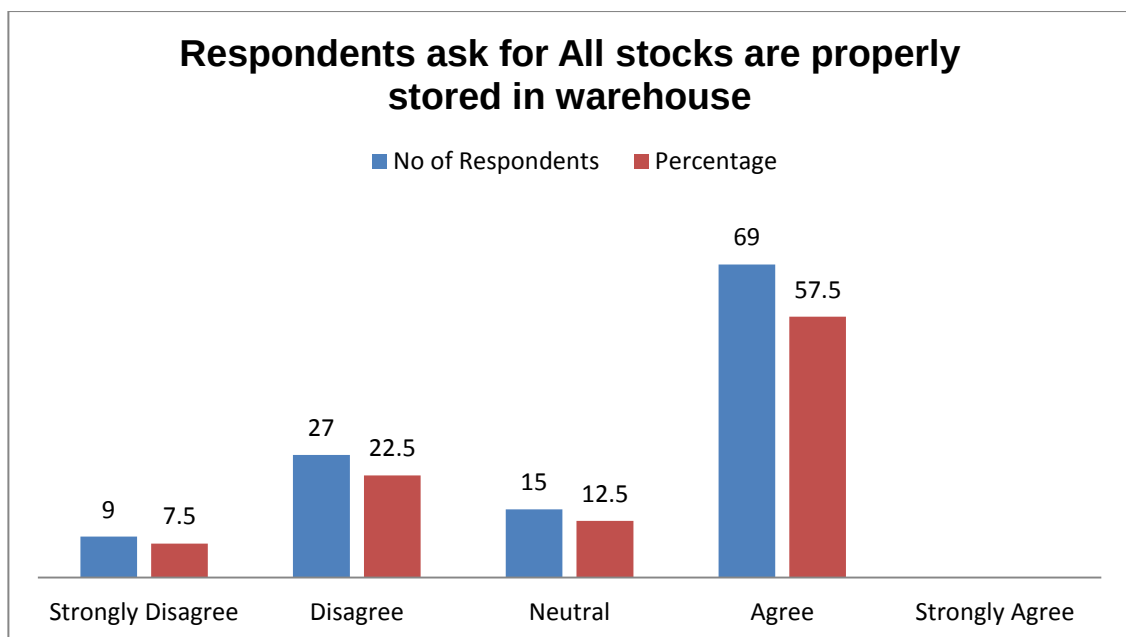


Chart No 4.1.19: Chart representing All stocks are properly stored in warehouse

INTERPRETATION

From the above table 57.5% respondents have rated no 4, 22% respondents said no 2, 12.5% respondents rated 3 and 7.5% respondents rated 1.

INFERENCE

Majority of the respondents rated it is very important for All stock are Properly stored in warehouse

Table No 4.1.20: Table showing All stocks are taken back from inventory without damage to the respondents

S No	Particulars	No of Respondents	Percentage
1	Strongly Disagree	12	10.0
2	Disagree	30	25.0
3	Neutral	42	35.0
4	Agree	36	30.0
5	Strongly Agree	0	0.0
Total		120	100.0

Source: Primary data.

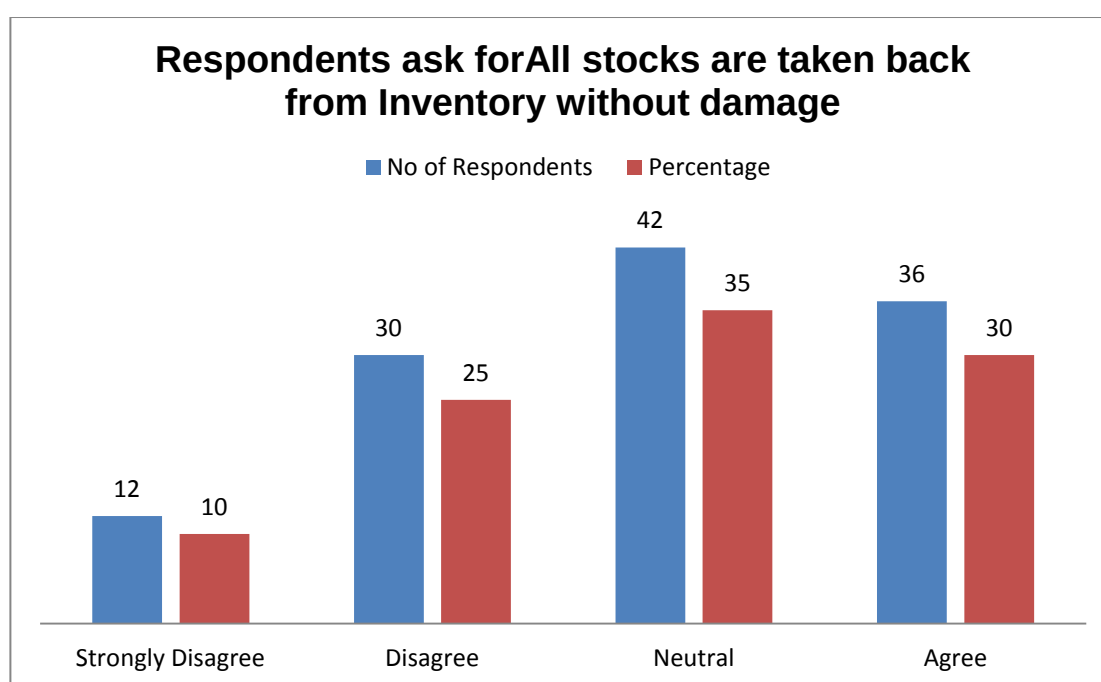


Chart No 4.1.20: Chart representing All stocks are taken back from inventory without damage

INTERPRETATION

From the above table 35% respondents have rated no 3, 30% respondents said no 4, 25.5% respondents rated 2 and 10% respondents rated 1.

INFERENCE

Majority of the respondents rated it is very important for All stock are taken bank from warehouse without any damage.

Table No 4.1.21: Table showing All products are sorted and stored according to the nature of product to the respondents

S no	Particulars	No of Respondents	Percentage
1	Strongly Disagree	3	2.5
2	Disagree	15	12.5
3	Neutral	33	27.5
4	Agree	69	57.5
5	Strongly agree	0	0.0
Total		120	100.0

Source: Primary data.

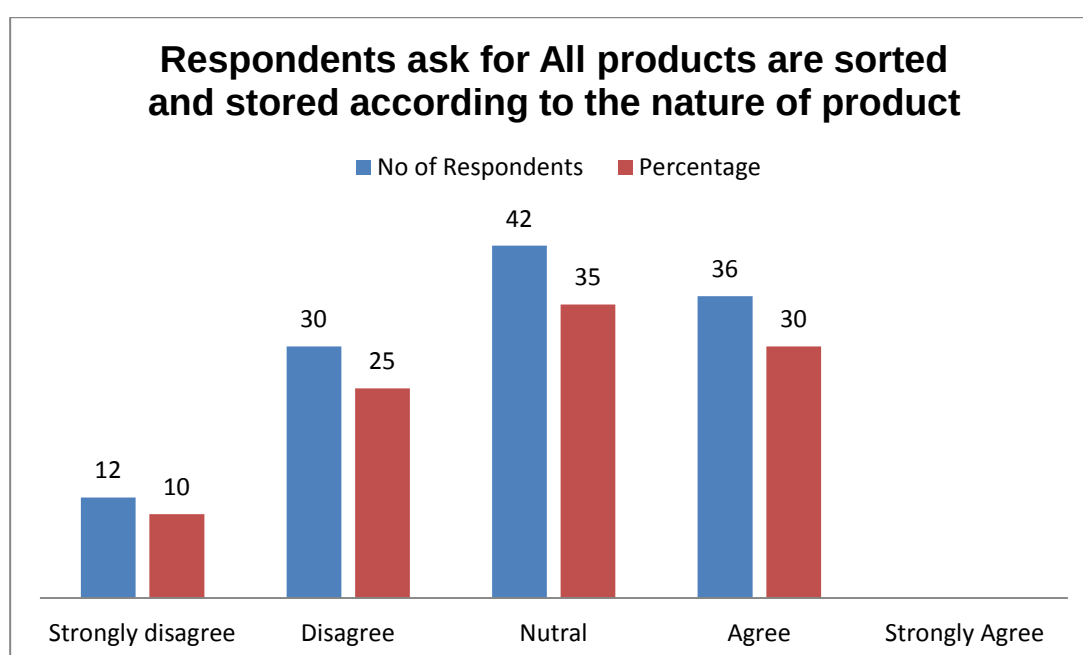


Chart No 4.1.21: Chart representing All products are sorted and stored according to the nature of product

INTERPRETATION

From the above table 57.5% respondents have rated no 4, 27.5% respondents said no 3, 12.5% respondents rated 2 and 2.5% respondents rated 1.

INFERENCE

Majority of the respondents rated it is very important for All products are sorted and stored according to the nature of Product

4.2 CHI SQUARE TEST

Null Hypothesis(H0)- There is no relationship between effective tracking means and Implementing 3PL reduces transportation cost.

Alternative Hypothesis(H1)- There is a relationship between effective tracking means and Implementing 3PL reduces transportation cost.

Table No.4.2.1:Table showing the crosstabulation Effective tracking means[Customized order and implementing 3PL reduces transportation cost]

Crosstab					
Count					
		Implementing 3PL reduces transportation cost			Total
		SA	A	N	
Effective tracking means	ordering Date	0	15	15	30
	Shipment Date	12	27	3	42
	Middle of the delivery	12	3	3	18
	Delivering Date	9	9	12	30
Total		33	54	33	120

Table No.4.2.2:Table showing Chi-square tests Effective tracking means[Customized order and implementing 3PL reduces transportation cost]

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	41.051 ^a	6	.000
Likelihood Ratio	48.734	6	.000
Linear-by-Linear Association	3.926	1	.048
N of Valid Cases	120		
a. 2 cells (16.7%) have expected count less than 5. The minimum expected count is 4.95.			

Source: Primary data.

INTERPRETATION:

P value $0.0 < 0.05$ so reject the null hypothesis. There is a relationship between effective tracking means and implementing 3PL reduces transportation cost.

Null Hypothesis(H0)- There is no relationship between effective tracking means and Delivering through 3PL involves high risk.

Alternative Hypothesis(H1)- There is a relationship between effective tracking means and Delivering through 3PL involves high risk.

**Table No 4.2.3:Table showing the crosstabulation Effective tracking means*
[Customized tracking means Delivering through 3PL involves high risk]**

Crosstab					
Count					
		Delivering through 3PL involves high risk			Total
		SA	A	DA	
Effective tracking means	ordering Date	21	9	0	30
	Shipment Date	12	27	3	42
	Middle of the delivery	15	3	0	18
	Delivering Date	18	12	0	30
Total		66	51	3	120

**Table No 4.2.4: Table showing Chi-square tests Effective tracking means*
[Customized tracking means Delivering through 3PL involves high risk]**

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	23.560 ^a	6	.001
Likelihood Ratio	25.313	6	.000
Linear-by-Linear Association	.600	1	.439
N of Valid Cases	120		
a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is .45.			

Source: Primary data.

INTERPRETATION:

P value $0.0 < 0.05$ so reject the null hypothesis. There is a significant association between the effective tracking means and delivering through 3PL involves more risk

Null Hypothesis(H0)- There is no association between effective tracking means and 3PL helps in effective transportation.

Alternative Hypothesis(H1)- There is a association between effective tracking means and 3PL helps in effective transportation

Table No 4.2.5: Table showing the Crosstabulation effective tracking means [Customized tracking means and 3PL helps in effective transportation]

Crosstab				
		Count		
		3PL helps in effective transportation		Total
		SA	A	
Effective tracking means	ordering Date	9	21	30
	Shipment Date	24	18	42
	Middle of the delivery	15	3	18
	Delivering Date	24	6	30
Total		72	48	120

Table No 4.2.6: Table showing Chi-square tests effective tracking means [Customized tracking means and 3PL helps in effective transportation]

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	20.476 ^a	3	.000
Likelihood Ratio	21.262	3	.000
Linear-by-Linear Association	17.634	1	.000
N of Valid Cases	120		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.20.			

Source: Primary data

INTERPRETATION:

P value $0.0 < 0.05$ so reject the null hypothesis. There is a significant association between the effective tracking means and 3PL implementation helps in effective transportation

4.3 ANOVA TEST

Null Hypothesis(H0)- There is no statistically significant relationship between transportation modes and respondents opinion about less number of defects in arrival of raw material

Alternative Hypothesis(H1)- There is a significant relationship between transportation modes and less no of defects in new arrival of raw material

Table No 4.3.1: Table showing the descriptive relationship between transportation modes and Less no of defects in arrival of raw material.

Descriptive							
		N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Less no of defects received from vendors	Roadways	24	2.38	.711	.145	1	3
	Railways	18	2.33	.485	.114	2	3
	Airways	75	1.68	.681	.079	1	3
	Waterways	3	1.00	.000	.000	1	1
	Total	120	1.90	.738	.067	1	3

Table No 4.3.2: Table showing the ANOVA relationship between transportation modes and Less no of defects in arrival of raw material.

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Less no of defects received from vendors	Between Groups	14.855	3	4.952	11.501	.000
	Within Groups	49.945	116	.431		
	Total	64.800	119			

Source: Primary data.

INTERPRETATION:

P value is 0.000 which is < 0.05 so, so reject the null hypothesis. There is a significant difference between the different modes of transport and the respondents about less no of defects received from vendors

Null Hypothesis(H0)- There is no statistically significant relationship between transportation modes and respondents opinion about there is a short time to replace damaged materials.

Alternative Hypothesis(H1)- There is a significant relationship between transportation modes and short time lead to replace damaged products.

Table No 4.3.3: Table showing the descriptive relationship between transportation modes and short time to replace damaged materials

Descriptive								
N	Mean	Std. Deviation	Std. Error	Minimum			Maximum	
Short time to replace damaged products	Roadways		24	2.13	.612	.125	1	3
	Railways		18	2.50	.514	.121	2	3
	Airways		75	2.08	.801	.093	1	3
	Waterways		3	2.00	.000	.000	2	2
	Total		120	2.15	.729	.067	1	3

Table No 4.3.4: Table showing the ANOVA relationship between transportation modes and short time to replace damaged materials

ANOVA						
Sum of Squares		Df	Mean Square	F		Sig.
Short time to replace damaged products	Between Groups	2.655	3	.885	1.693	.172
	Within Groups	60.645	116	.523		
	Total	63.300	119			

Source: Primary data.

INTERPRETATION:

P value is 0.172 which is > 0.05 so, so accept the null hypothesis. There is no significant difference between the different modes of transport and the respondents opinion on short time to replace the damaged goods.

Null Hypothesis(H0)- There is no statistically significant relationship between transportation modes and respondents opinion about that it is difficult to identify damaged products

Alternative Hypothesis(H1)- There is a statistically significant relationship between transportation modes and difficult to identify damaged products.

Table No 4.3.5: Table showing the descriptive relationship between transportation modes and difficult to identify damaged products

Descriptive								
N	Mean	Std. Deviation	Std. Error	Minimum			Maximum	
Difficult to identify Damaged products	Roadways		24	1.63	.495			.101 1 2
	Railways		18	1.33	.485			.114 1 2
	Airways		75	1.44	.500			.058 1 2
	Waterways		3	1.00	.000			.000 1 1
	Total		120	1.45	.500			.046 1 2

Table No 4.3.6: Table showing the ANOVA relationship between transportation modes and difficult to identify damaged products

ANOVA						
Sum of Squares		Df	Mean Square		F	Sig.
Difficult to identify Damaged products	Between Groups		1.595	3	.532	2.194 .092
	Within Groups		28.105	116	.242	
	Total		29.700	119		

Source: Primary data.

INTERPRETATION:

P value is 0.092 which is > 0.05 so, so accept the null hypothesis. There is no significant difference between the different modes of transport and the respondents opinion that it is difficult to identify the damaged product

4.4CORRELATION TEST

Table No 4.4.1: The Table showing the correlation between Defects of Raw Material and implementing 3PL reduces transportation cost

Correlations			
		Less no of defects received from vendors	Implementing 3PL reduces transportation cost
Less no of defects received from vendors	Pearson Correlation	1	.413 ^{**}
	Sig. (2-tailed)		.000
	N	120	120
Implementing 3PL reduces transportation cost	Pearson Correlation	.413 ^{**}	1
	Sig. (2-tailed)	.000	
	N	120	120
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Primary data

INTERPRETATION:

P value is $0 < 0.05$, so reject the null hypothesis. The correlation is significant among the variables taken

Table No 4.4.2: The Table showing the correlation between short time to replace damaged products and 3PL helps in effective transportation

Correlations			
		Short time to replace damaged products	3PL helps in effective transportation
Short time to replace damaged products	Pearson Correlation	1	.253**
	Sig. (2-tailed)		.005
	N	120	120
3PL helps in effective transportation	Pearson Correlation	.253**	1
	Sig. (2-tailed)	.005	
	N	120	120
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Primary data.

INTERPRETATION:

P value is $0 < 0.05$, so reject the null hypothesis. The correlation is significant among the variables taken

CHAPTER 5

5.1 FINDINGS

- Majority 52.5% respondents are in the age group of 31-40 Age.
- Majority 67.5% respondents are Male.
- Majority 75% respondents are supervisor category.
- Majority 50% of respondents monthly income is 25000 – 35000.
- Majority 47.5% of respondents said that Transportation is the best of assurance for the movement of goods.
- Majority 62.5% of respondents said that Airways is the effective way of transportation.
- Majority 35% of respondents said that Shipment date is the effective means of tracking the order.
- Majority 50% of respondents Strongly agree that Raw material purchase is based on the requirement.
- Majority 40% of respondents Agree that the Raw material is best quality.
- Majority 70% of the respondents put together strongly agree and agree for the raw materials delivered on time.
- Majority 40% of the respondents are neutral in short lead time.
- More than 70% of the respondents put together strongly agree and agree that less number of defects received from vendors.
- Majority 45% of the respondents agreed that short time only required to replace the damaged goods.
- Majority 55% of the respondents strongly agree that it is difficult to identify the damaged product.
- Majority 45% of the respondents agree that implementing 3PL helps in reducing transportation cost.
- Majority 55% of the respondents strongly agree that delivery through 3PL involves high risk.
- Majority 60% of the respondents strongly agree that 3PL helps in effective transportation.
- ANOVA : There is no significant difference in opinion of factors of Logistics management effectiveness among different age groups

5.2 SUGGESTIONS

- Even majority of the respondents are agree that the logistics management practices are effective in case of purchase of raw material, reducing defective pieces and helps in reduction of transportation cost, less percentage of respondents have given neutral and negative opinion. Company can implement the logistics management practices in full fledge.
- Based on the observation the information system for logistics management is implemented in the company which is not in full fledged. If it is implemented fully then most of the practices will be systematically done.
- Middle level managers opinions somewhat differ with supervisors which can be corrected.

5.3 CONCLUSIONS

The study of Logistics Management of Anabond Ltd aimed at studying the effectiveness of logistics management practices implemented in the company. The overall performance of the company is studied along with logistics management practices. The company has an effective Logistics management system, being a manufacturing company which is must. The Logistics management practices helps the organization to improve the overall performance of the company.

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APPENDIX-I (QUESTIONNAIRE)

1. Name

2. Age : <20

20-30

30-40

40-50

>60

3. Gender: Male

Female

4. Designation: Asst. Manager

Manager

Other s (please mention).....

5. Income per month:<15,000

15,000-25,000

25,000-35,000

35,000-45,000

>45,000

6. Which factor assures the movement of goods from one place to another in the effective way

a. Transportation

b. E way billing

c. Tracking orders

7. Which transportation medium is faster, saves energy and speeds delivery time ?

- a. Roadways
- b. Railways
- c. Airways
- d. Water ways

7. When the tracking system is available for the customers to track their orders?

- a. Ordering date
- b. Shipment date
- c. Middle of the delivery
- d. Delivering date

RAW MATERIAL

		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
9	Raw materials purchased from the vendor are according to the specification required					
10	Raw materials purchased from vendor are of best quality					
11	Raw materials are delivered on time					
12	Raw materials purchased from the vendor have sorted lead time					

WASTAGE

		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
13	There are less number of defects received from the vendor					
14	The damage products are replaced in shorter duration					
15	It is difficult to identify the damaged product					

3PL

		Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
16	Implementing 3PL results in low transportation cost					
17	Delivering product through 3PL involves high risk					
18	3PL helps me for effective transportation					

INVENTORY

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Disagree
19	All stocks are properly stored in the warehouse					
20	All products are dispatched from the inventory with out any damage					
21	All products are sorted and stored according to the nature of the product					

APPENDIX-II (Article)

A STUDY ON LOGISTIC MANAGEMENT ON ANABOND LIMITED CHENNAI

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ABSTRACT :

Now a days companies implement supply chain management and logistics management to reduce costs, increase performance and enhance operational efficiency. The logistics in modern business conditions coordinates and integrates the movement of materials and products from physical, organizational and information aspect. This research aims to study ANABOND LTD CHENNAI company's logistics management including transportation, warehousing, packaging, inventory and information management. Reducing cost of each logistics activity influences the total amount of costs and enhances company's performance. This paper determines and defines the logistics activities that are of key importance to the company's success. The descriptive research adopted in this study. Totally 120 samples were collected from the middle managers. The general hypothesis is fully validated and proven by the survey results. Adequate inventory, storage, warehousing, transport and information management are key targets for logistics managers in order to reduce the overall costs of the company. Findings include the confirmation of the necessity of logistics managers to optimally manage all logistics activities in order to gain increased business efficiency.

KEYWORDS: Logistics Management, Performance, Managers

INTRODUCTION :

The advent of modern industrialization has in its wake highlighted a number of management problems. An important one of which is cost control and cost reduction by establishing the standard SCM Strategies. This is made possible by utilizing modern technologies with the assistance of Electronic Data Processing (EDP) and

Radio Frequency Identification (RFID) technologies. Since the cost of the material accounts for nearly more than 60% of the total cost in production industries, materials are produced and stocked in the shape of inventories and most of the materials start from raw material to work in process and finished goods. By using modern electronic data processing technologies in addition to operations research techniques, like EOQ, Just In Time (JIT) and ABC analysis of materials classifications, Vendor Managed Inventory (VMI) has improved throughput time of the machines on the shop floor.

Basically, it is necessary, to hold inventories such as raw material, work in progress, spares and equipments, finished goods to act as cushions between supply and demand. Both of these will normally fluctuate. This thesis is aimed at facilitating efficient plant operations and making way to meet orders promptly and to keep the manufacturing cycles going smoothly with the least interruption.

In the industry, there must be a control the various types of inventories and necessary to have a control mechanism for the SCM activities. 2 Proper storage of inventories could contribute higher credit to the industry"s project. Thus, the cycle of production is made up of materials inflow and a corresponding finished good outflow. The intermediate stages are being the storage of stock of raw materials, holding of goods in process and the stock of the finished goods.

OBJECTIVES OF THE STUDY :

The objectives of the study are as follows:

1. To study the logistics management practices
2. To find the relationship between organization performance and logistics practices.
3. To find out the operation performance of company.
4. To understand the logistics management practices and its implementation in organization..

LOGISTICS MANAGEMENT PRACTICES AND ORGANISATIONAL

PERFORMANCE :

Logistics management organizations are tasked with the responsibility of formulating and implementing strategies that if adopted will lead to achievement of a sustained competitive advantage. Logistics refers to the flow of resources between the point of origin and the point of consumption in order to meet requirements of customers or corporations (Vikapia, 2005). The resources managed in logistics can include physical items such as food, materials, animals, equipment, and liquids; as well as abstract items, such as time and information. Logistics management is the part of supply chain management that plans, implements, and controls the efficient, effective forward, and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customer's requirements.

Logistics management plays a significant role in the success of any company's operations and has a direct impact on its bottom line. More importantly, logistics processes play a big part in customer satisfaction, which is more important than low product costs. Logistics professionals should think of themselves as a customer-facing portion of the company and strive every day to add value for their customers. Logistics management practices involve the operations that manage the inventory flow from the store's receiving dock to the point of sale passing through the stock room (store warehouse). Logistics operations include handling, ordering, arranging and processing of merchandise within the store (Samli, 2005). It involves returns from the customers as well as end of season returns from the store to the Distribution Center (DC).

REVIEW OF LITERATURE :

Now-a-days, many leading manufacturing industries have started to practice various concepts to boost up their productivity as well as the quality of their products. The industries have understood that in order to survive in this competitive world, they have to satisfy their customers. SCM serves the best to sustain in the field. The supply chain is not static but considers the uniform information flow as well as

constant materials and finds flow across areas to improve product quality and to aim flexibility and responsiveness to meet the changing market requirements.

Sarac et al. (2014) have explained about the potential benefits of SCM through reduction of inventory losses, increasing efficiency, speed of process and information improvement. The study asserted that RFID which is an automatic identification and data capture technology, as a tool improves the benefits of SCM and discussed the impact of this technology. It is considered as new technology, relevant in the future to consider new reengineering possibilities to optimize the benefits of RFID technologies in supply chains.

Pal et al. (2014) have explained about the Collaborative Material Procurement System (CMPS) in the supply chain, based on 16 multi-agent and service-oriented computing and employed techniques for service matching. It also discussed the complex integration problem and its possible rectification using domain ontology. It also explained how ontologies are used in CMPS implementation purpose and patterns regarding semantic web services.

Azadi et al. (2015) suggested that the Data Envelopment Analysis (DEA) is a technique which could be employed for sustainable performance evaluation. DEA is widely employed to account for the manifold criteria associated with problems of decision making. The model put forward finds utility in other defined problems, for instance, the selection involving international trade as well as technologically-rooted choices. All these demonstrate that the put forward presentation is capable of measuring effectiveness, productivity as well as efficiency in a situation that is uncertain. DEA is a non-parametric linear programming method to appraise the associated Decision Making Units (DMU"s) efficiency.

Angeles (2009) collected data is survey questionnaire-based, carried out online and directed at the associates of the Council for Supply Chain Management Professionals (CSCMP). This study addressed information technology issues that are vital for supporting a SCM system using RFID. This study viewed the capability of the parts of the integration of IT infrastructure as well as the integration of supply chain procedure to calculate the exact RFID scheme deployment results, which are the creation of market knowledge, exploration, operational efficiency as well as

exploitation. It states that information is a principal tool that powers the contemporary supply chains.

Shin et al. (2011) mentioned the increasing difficulty of securing material stockyards and the resolution of the associated challenges of traffic, thus, generating a growing requirement of JIT delivery. The 17 concept of SCM depends on the concept of JIT procurement. A definition for SCM is an approach, strategic in nature that searches for the most favourable benefit as well as efficiency of the complete Supply Chain Network (SCN) through joining interactions of chain as well as the cooperative direction of the members included, having a complete perception on information flow, and movement of material and the cost involvement in the supply chain. Developed prototype computer system program employed in this analysis. To prove that service-based integration of the information framework by way of development of an information based framework as well as introducing Service Oriented Architecture (SOA) with RFID and Wireless Sensor Network (WSN) technology, which in turn framework could MIS and communication among the CSCM.

Vancza et al. (2013) discussed the requirement forecasting by the manufacturer and costs expected by the customer which are asymmetric are analysed with combined planning for getting better supply chain network. Thus a new method suggested for arriving solution for this complications with the usage of a separate design of mechanism. The research explained the complications of inter-departmental planning in supply chains where the supply partners have information related to the variety and non-symmetric demand and supply related knowledge information. Autonomous decision could be done their own consideration, based on the conflicting objectives. The requirements towards a mechanism which introduces the generic cooperative facilities planning particularly, via the structure of a theoretical model by one side. On the other side with the conditions of good practices of management. Basic model of the cooperative supply service with the application of the concepts of mechanism design are explained through this study.

RESEARCH METHODOLOGY :

The type of research design used in this paper is descriptive research, because it helps to describe a particular situation prevailing with in a company. Convenience

sampling technique is used and the sampling unit is the middle Level Managers and Supervisors of Anabond Ltd(Including Dealers). One hundred and twenty samples are selected out of 250 (Including all supervisor level) numbers. Both the primary and secondary data are collected. Questionnaire is used to collect primary data. Secondary data are collected from the company, records and magazines. It has been compiled from the report and official publication of the organization. Percentage analysis, Chi-Square, ANOVA and RANK Correlation are the statistical techniques used to analyse the data of this study

PERCENTAGE ANALYSIS

S. No	Particulars	No. of Respondents	Percentage
1.	Gender of the respondents		
	Male	81	67.5
	Female	39	32.5
	Total	120	100.0
2.	Designation		
	Asst Manager	6	5.0
	Manager	24	20.0
	Other categories	90	75.0
	Total	120	100.0
3.	Effective tracking means		
	Ordering date	30	25.0
	Shipment date	42	35.0
	Middle of the delivery	18	15.0
	Delivering date	30	25.0
	Total	120	100.0
4.	Assurance for effective movement		
	Transportation	57	47.5
	E way billing	39	32.5
	Tracking orders	24	20.0
	Total	120	100.0

RESULTS AND DISCUSSION

CHI SQUARE

The Table showing Chi-square tests Effective tracking means [Customized order and implementing 3PL reduces transportation cost]

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	41.051 ^a	6	.000
Likelihood Ratio	48.734	6	.000
Linear-by-Linear Association	3.926	1	.048
N of Valid Cases	120		
a. 2 cells (16.7%) have expected count less than 5. The minimum expected count is 4.95.			

There is a relationship between effective tracking means and implementing 3PL reduces transportation cost.

CORRELATION

The Table showing the correlation between Defects of Raw Material and implementing 3PL reduces transportation cost

Correlations			
		Less no of defects received from vendors	Implementing 3PL reduces transportation cost
Less no of defects received from vendors	Pearson Correlation	1	.413 ^{**}
	Sig. (2-tailed)		.000
	N	120	120
Implementing 3PL reduces transportation cost	Pearson Correlation	.413 ^{**}	1
	Sig. (2-tailed)	.000	
	N	120	120
^{**} . Correlation is significant at the 0.01 level (2-tailed).			

P value is $0 < 0.05$, so reject the null hypothesis. The correlation is significant among the variables taken

Relationship Between Logistics practices and Organisational Performance

There is a significant difference between the different modes of transport and the respondents about less no of defects received from vendors.

There is no significant difference between the different modes of transport and the respondents opinion on short time to replace the damaged goods.

There is no significant difference between the different modes of transport and the respondents opinion that it is difficult to identify the damaged products.

There is a significant Correlation between respondents opinion on less number of defects in RM and Implementation of 3PL reduces transportation cost. There is a significant Correlation between respondents opinion on short time to replace damaged products and 3PL helps in effective transportation. There is no significant association between the effective tracking means and Implementing 3PL reduces transportation cost. There is no significant association between the effective tracking means and delivering through 3PL involves more risk. There is no significant association between the effective tracking means and 3PL implementation helps in effective transportation.

CONCLUSION :

Majority of the respondents are agree that the logistics management practices are effective in case of purchase of raw material, reducing defective pieces and helps in reduction of transportation cost, less percentage of respondents have given neutral and negative opinion. Company can implement the logistics management practices in full fledge. Based on the observation the information system for logistics management is implemented in the company which is not in full fledge. If it is implemented fully then most of the practices will be systematically done. Middle level managers opinions somewhat differ with supervisors which can be corrected

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