

A STUDY ON CHOICE OF TRANSPORTATION MODE IN LOGISTICS INDUSTRY AT CHENNAI

Submitted in partial fulfillment of the requirements for the award of

Master of Business Administration

by

Nandhini Pooja R

Reg No: 39410130



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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Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai – 600 119
www.sathyabama.ac.in

SCHOOL OF BUSINESS ADMINISTRATION

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **NANDHINI POOJA R (39410130)** who carried out the Project work entitled **A STUDY ON CHOICE OF TRANSPORTATION MODE IN LOGISTICS INDUSTRY AT CHENNAI** under my supervision from **January 2021 to April 2021**.

MS.KAVITHA RAJAYOGAN
Internal Guide

External Guide

Dr. BHUVANESWARI G.
Dean – School of Business Administration

Submitted for Viva voce Examination held on _____.

Internal Examiner

External Examiner

DECLARATION

I **NANDHINI POOJA R (39410130)** hereby declare that the Project Report entitled **A STUDY ON CHOICE OF TRANSPORTATION MODE IN LOGISTICS INDUSTRY AT CHENNAI** done by me under the guidance of **MS.KAVITHA RAJAYOGAN B.E.,M.B.A** at **SATHYABAMA INSTITUTE SCIENCE AND TECHNOLOGY** is submitted in partial fulfillment of the requirements for the award of Master of Business Administration degree.

DATE:

PLACE:

SIGNATURE OF THE CANDIDATE

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ABSTRACT

Today the task and responsibilities of business executives have become critically important due to technological advancement, increasing awareness of people, growing size and complexity of business. Increasing participation of Govt. in the economy, rising standard of living and increasing competition. There is feeling that Indian corporate business has also entered from seller's market to buyer's market in the business environment in general and because of increasing awareness among the buyers, increasing competitions in market, the study of buyer behavior, in consumer products are gaining importance in order to satisfy the needs and wants of people by providing correct products.

This project involves descriptive research for data collection. This study is based out of primary and secondary research; carried out that would help to gather fresh data which can be analyzed with the past data to seek the existing trends in logistics industry. This would include usage of questionnaire as a tool for gathering data. The respondents were selected randomly from the Chennai customer list provided by the companies. The research questions are set to be asked to the Clients of Logistics companies. Secondary data for the study has been compiled from the internet sources, magazines and newspapers which have been helpful in getting an insight of present scenario. The sample sizes of 120 respondents are interrogated and the results are analyzed using various inferential analysis viz., Chi-square Test, ANOVA, Correlation. The results of these study shows positive results which is beneficial for the companies as the respondents are satisfied and they are loyal to the companies

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CHAPTER 1

INTRODUCTION

1.1 RESEARCH BACKGROUND

In this modern world of globalization everything is changing day-by-day, as innovation is the rule of nature. There is a tremendous change in consumer's buying behavior also. Now everywhere consumers are more conscious about their purchasing. Now they are more aware and more educated. Per person income is also increasing and it is the reason now people are spending more.

Logistics play a vital role in such areas as productivity and growth in the "Industry 4.0" era, which is characterized by pure digital technology. Logistics will, increasingly, be built more on technological developments, with the more prevalent effects of Industry 4.0, which blends in information technologies and industry. Subsequently, advancements in the logistics industry will be most observed in commercial vehicles, transportation operations, and automated warehouses. In the new-generation trailer trucks, vehicles will be in constant communication with each other, customs offices, manufacturing plants, and roads.

Transportation plays a connective role among the several steps that result in the conversion of resources into useful goods in the name of the ultimate consumer. It is the planning of all these functions and sub-functions into a system of goods movement in order to minimize cost maximize service to the customers that constitutes the concept of business logistics. The system, once put in place, must be effectively managed. (Fair *et al.*, 1981) Traditionally these steps involved separate companies for production, storage, transportation, wholesaling, and retail sale, however basically, production/manufacturing plants, warehousing services, merchandising establishments are all about doing transportation. Production or manufacturing plants required the assembly of materials, components, and supplies, with or without storage, processing and material handling within the plant and plant inventory. Warehousing services between plants and marketing outlets involved separate transport.

Merchandising establishments completed the chain with delivery to the consumers. The manufacturers limited themselves to the production of goods, leaving marketing and distribution to other firms. Warehousing and storage can be considered in terms

of services for the production process and for product distribution. There have been major changes in the number and location of facilities with the closure of many single-user warehouses and an expansion of consolidation facilities and distribution centres. These developments reflect factors such as better transport services and pressures to improve logistics performance.

The Role of Transportation in Service Quality

The role that transportation plays in logistics system is more complex than carrying goods for the proprietors. Its complexity can take effect only through highly quality management. By means of well-handled transport system, goods could be sent to the right place at right time in order to satisfy customers' demands. It brings efficacy, and also it builds a bridge between producers and consumers. Therefore, transportation is the base of efficiency and economy in business logistics and expands other functions of logistics system. In addition, a good transport system performing in logistics activities brings benefits not only to service quality but also to company competitiveness.

The transport- and logistics industry is especially vulnerable to this development. Transports play a critical role in the supply chain and have attracted attention in recent years because of their negative environmental impact. In order to turn environmental problems into business opportunities, logistics service providers must work towards establishing and adopting green logistics initiatives. The importance of green management has increased dramatically over the past decade, and in order to deliver products and services to customers in more environmentally friendly ways, logistics service providers need to improve their green performance. Green management and integrating green issues into logistics service offerings has involved more and more LSPs and will probably attract even more managerial attention in the logistics industry in the future. Research into the type and content of logistics services has previously divided logistics services into transports, warehousing, inventory, value-added services, information services and the design and reengineering of the supply chain. Although logistics service providers are becoming aware of environmental problems and are turning greener, the integration of green thinking into *logistics service offerings* is still at an early stage. An offering can be regarded as having two elemental characteristics: its value to the customer and its price. To integrate environmental thinking into the service offerings and

quantify its added value will be a challenge for logistic service providers, and it is clear that there is a lack of knowledge and research in this area.

Customer Satisfaction: Most researchers realized the importance of satisfaction and looked into the importance of customer satisfaction. Customer satisfaction is often defined as the customers' post-purchase comparison between pre-purchase expectation and performance received. Contended that satisfaction is the emotional reaction to a specific product/service experience, and these emotional reactions come from disconfirmation of a consumer's perceived performance of product or service and his or her expectations of performance. Satisfaction is "a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations". Satisfaction can be associated with feelings of acceptance, happiness, relief, excitement, and delight. Customer satisfaction is defined as the perceived value acquired by a consumer in purchasing a particular product, as well as the satisfaction level with service during the trading process. Customer satisfaction lies at the core of a sequence of relationships, including the antecedents of customer satisfaction like perceived quality and perceived value with the consequence of customer satisfaction. Customer satisfaction level is an integrated assessment response which represents the summation of customers' subjective responses to different attributes of a product. disagreed with the idea that the best method of measured customer satisfaction level is evaluating the product overall integrated satisfaction level and thought that using this kind of evaluation method to ask customers to make a quick response while they are facing complex circumstances would result in the loss of relevant information. Therefore, many scholars measure the customer satisfaction level on each attribute of a product in addition to the integrated satisfaction level.

Several researchers have studied the relationship between quality perceptions and satisfaction towards service quality. Although, some inconsistency exists across these findings, there is considerable evidence that service quality perception is among the antecedent factors that influence customer judgment of satisfaction. This theoretical perspective portrays customer satisfaction as a holistic construct resulting from judgment about a variety of factors. In addition, an array of effort in service quality research explored its relationship with satisfaction in logistics environment. These researches include research on physical distribution service quality, the logistics services and satisfaction relationship, and the expanded LSQ framework

and logistics customer segments and satisfaction. More recent efforts examined the relationship between LSQ, satisfaction, customer loyalty, and market share

Loyalty: The concept of loyalty is widely analyzed in literature, especially from a marketing perspective. A review of recent empirical articles published in leading marketing journals shows that within both business-to-consumer (B2C) and business-to-business (B2B) research, no standard for the measurement of customer loyalty has emerged. Although the multidimensional nature of customer loyalty has been acknowledged for years, no consensus is reached regarding the dimensions to be incorporated in its measurement. Loyalty reflects a deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future, thereby causing repetitive same-brand or same brand-purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior. This in simple terms means loyalty shows consumer giving preference to a particular brand or company, although satisfactory alternatives may exist. There are two main streams of research in loyalty consisting of behavioral loyalty and attitudinal loyalty. Many researchers view customer loyalty as either repurchase behavior or repurchase behavior combined with attitudinal component. The behavioral loyalty approach is based on aspects of probability of purchase, purchase frequency, purchase amount, repeat purchase behavior, purchase sequence, brand switches over time and multiple aspects of purchase behavior. On the other hand, the attitudinal loyalty approach emphasizes customer psychological disposition towards building loyalty and reflecting customer action, involving the measurement of customer purchase attitude. The attitudinal loyalty approach mainly focuses on brand recommendations, resistance to superior products, willingness to pay a price premium and repurchase intention. Loyalty be evaluated with both behavioral and attitudinal component. This is because purchase decision in loyalty does not distinguish between true or “intentional” loyalty and spurious loyalty. Spuriously loyal customers lack attachment to brand attributes. They would buy other brand products if there are better promotions or offer. While theorized loyalty consists of attitudinal loyalty and behavioral loyalty with the former leading to the latter, it was which empirically tested theoretical framework and proved that to be true. The theory and the empirical findings practically reinforced the tripartite attitude model. Therefore this paper takes the position that attitudinal loyalty leads to behavioral loyalty.

The company needs to know the customer choice of transportation business of the company in order to make sound decisions on brand building. The study of customer preference indicates the expectations of the customers. Customer preference helps to understand the loyalty of the customer towards the services rendered by the company on transportation. The management finds a possible way to fulfill the expectations of customers and thereby attracts new customers. The study aims to find the customers' satisfaction level to predict the customer choice of Logistics companies. The respondents were selected randomly from the Chennai customer list provided by the company. The research questions are set to be asked to the Client organizations of Logistics companies. Secondary data for the study has been compiled from the internet sources, magazines and newspapers which have been helpful in getting an insight of present scenario

1.2 INDUSTRY PROFILE

Logistics industry majors across the value chain are expected to prioritize operational efficiencies, with investments in technology adoption. Slowdown in world trade is expected to hit the air cargo market's volume growth and yield performance, as freight capacity growth is expected to outstrip demand due to weakened consumer confidence. Post COVID-19, the global logistics market size is projected to grow from USD 2,734 billion in 2020 to USD 3,215 billion by 2021, at a Y-O-Y of 17.6%.

The major drivers of this market are increasing their focus on the continued supply of essential commodities, creation of a supply chain stabilization task force to fight COVID-19, as well as on the growing demand and distribution of personal protective equipment. The factors that restrain the market are labour shortage and a shortage of COVID-19 testing kits. The projection for 2021 is estimated to be down by over 10-15% as compared to the pre COVID-19 estimation. Most countries are experiencing supply pressure due to panic buying by consumers due to COVID-19 impact. As a result, FMCG companies are continuously tracking the current situation and are coming up with new strategies to ensure continued supply.

The agriculture sector has been exempted from the restrictions laid down by nations. This has ensured sufficient supplies of food and other daily needs products. E-groceries continue to meet the increasing demand for daily supplies required by consumers.

Roadways are relatively less affected by the COVID-19's impact on the logistics sector when compared with airways and waterways. Trucking is seen as a critical mode of transport amid the pandemic. However, the primary concern faced by the road transport segment is driver shortage and ensuring the health and safety of the available drivers as well as their infrastructure. Being the preferred mode of transport for essential goods, road transport is relied upon heavily for the continued supply of food, medicine, and other essential products.

Asia Pacific is expected to have the largest market size for the logistics industry as the region has taken stringent and early measures to contain the pandemic outbreak. China has started to recover from the COVID-19 pandemic faster than any other country.

Only some provinces of the entire country are in lockdown after the second wave of COVID-19. The World Health Organization has also appreciated India's control over the spread of the pandemic. This has allowed the logistics and supply chain companies to meet consumer demands during the pandemic situation.

LOGISTICS INDUSTRY IN INDIA

The logistics industry in India is highly fragmented with a large number of unorganized players. While there is a need for the highly fragmented Indian logistics market to get more organised, there is also a need to reduce logistics cost to 10 per cent by 2022 from about 14 per cent now. Only 10-15 per cent of the \$215-billion Indian logistics market is owned by organised players. Blue Dart operates in the express logistics industry which, caters to multiple sectors as well as individual customers by providing time definite services. Express delivery services are used for various products such as securitised documents, electronic products, automotive components, temperature controlled shipments, trade samples, lifesaving drugs, mobile phones, etc.

The Indian logistics industry has been gaining traction in the last few years and plays a very important role in facilitating trade and thereby propelling the growth of the Indian economy.

Several factors such as – improving infrastructure nationwide, opportunities in emerging markets and channel alliances, urbanisation, faster adoption of newer technologies and digitalization, increased consumer preference for the reduced delivery time, and deployment of innovative techniques for a fast delivery of products

are all playing the role of a catalyst in fuelling the growth of the logistics industry in India. The logistics industry, considered to be the lifeline of the country, holds unprecedented importance as it connects various markets, suppliers and customers dotted across the country, and has now been firmly embedded as an integral part of the national GDP value chain.

The deeper penetration into Bharat (Tier II, III & IV towns), economy enhancing initiatives, GST implementation and other initiatives such as Make in India, Digital India and soon to be released National Logistics Policy, all hold a promise for an efficient and integrated logistics industry in the days ahead.

Despite the enhancement in the logistics performance index from the 54th Rank in 2016 to 35th rank in 2018, India has substantial potential for improvement. The Indian logistics sector provides livelihood to more than 22 million people and improving the sector will facilitate 10 % decrease in indirect logistics cost leading to the growth of 5 to 8% in exports.

The growth in logistics sector is expected to be driven by increasing penetration of products into more cities and towns, as well as the growth of economic activity and manufacturing moving to these towns. In addition, the demand for value-added services from consumers provides opportunities for the industry players to elevate themselves from an operational role to a more strategic one.

The logistics industry is highly fragmented and consists of over 1,000 active players which include large scale domestic players, leading entities of global players, the express arm of the government postal service and emerging start-ups specializing in e-commerce deliveries. Infrastructure readiness and technology are expected to be the key drivers of growth for the Indian logistics industry. However, significant economic fallout due to the novel coronavirus will result in slowing down the growth across the country's highly fragmented and unorganized logistics landscape.

Government Policy in Logistic Industry

The Ministry of Commerce & Industry estimates that presently the country spends about 14% of its GDP on logistics which is much higher than Japan (11%) and the USA (9-10%). During the Union Budget 2020-21, the Government of India announced that a National Logistics Policy will be released soon clarifying the roles of the Union Government, State Governments and key regulators. Policy also talks

about reduction in the logistics cost to less than 10% of GDP by 2022. With the implementation of GST, the Indian logistics market is expected to reach about USD 215 billion in 2020, growing at a CAGR of 10.5 per cent.

1.3 IDENTIFIED PROBLEM

This study speaks about the current status of customer choice towards the transportation services of Logistics companies. Challenges and requirements of planning for logistics companies are also discussed. Many of the logistics and supply chain companies are using latest transportation modes to maintain the effective process of transportation. The project speaks about the causes and effects of transportation system adopted in Logistics companies. Logistics companies are facing troubles in maintaining their systems effectively due to various reasons. Technology is a boon to them.

1.4 NEED FOR THE STUDY

- ✓ Logistics companies needs to know the customer choice of transportation business of the company in order to make sound decisions on brand building.
- ✓ Surveys on customer opinion on services can produce positive or negative feedback, but bringing a numerous of benefits to the company.
- ✓ A study on customer perception helps to understand the performance of the organization and the behavior of the customers.
- ✓ The study of customer preference indicates the expectations of the customers.
- ✓ Customer perception helps to understand the loyalty of the customer towards the services rendered by the company on logistics.
- ✓ The organization finds a possible way to fulfill the expectations of customers and thereby attracts new customers
- ✓ Perception and need for effective transportation system is the need of the hour

1.5 OBJECTIVES OF THE STUDY

Primary Objective

To study the effectiveness of customer choices regarding the transportation modes and services offered by logistics companies

Secondary objectives

- ✓ To study the satisfaction level on the efficiency of internal operations of the logistics company
- ✓ To know the satisfaction level towards services provided by the company
- ✓ To understand the changes that are expected from the company
- ✓ To find the overall satisfaction level towards the booking and delivery process of logistics companies

1.6 SCOPE OF STUDY

The study aims to find the customers' satisfaction level to predict the customer choice of transportation business of Logistics companies. The study is restricted to information regarding the customer's likes and dislikes, their expectations, material selection, quality checks, maintenance services etc. The study has been carried out for period of 4 weeks and has focused on customers from all sectors. The expectations and needs of customers are to be identified and to determine their behaviour help the logistics company to perform their maximum thus improving the brand image too. The study would deliver the satisfaction and rating perception of the customers towards the transportation services of Logistics companies in attracting the customers in Chennai. This exercise has also gone a long way in helping the major players to decide their promotional strategies that would attract more and more customers towards the company. This study is limited to the customers in Chennai city.

CHAPTER 2

LITERATURE SURVEY

2.1 REVIEW OF LITERATURE

V. Zeimpekis & G. M. Giaglis (2003), the issue of buyer-seller relationships in supply chain management research is becoming increasingly critical. Contemporary global markets, with their characteristics such as smaller and variable productions, rapid market changes and shorter lead times, represent a fundamental shift from a linear, sequential supply chain to an adaptive, agile supply chain network. In this context, the improvement of inventory management in warehouses and distribution centres appears to be a must, and wireless technology can be an effective solution to enhance business operation. This paper aims to improve current warehouse management practices by proposing an on-line, real-time hybrid wireless system that will facilitate the control of inventory operations and will be able to fulfill domestic and international customers' needs, more effectively.

Tarun Radadiya (2015), logistics is traditionally driven by operational demands. Therefore innovations are mainly based on direct customer requests. However, logistics service providers (LSPs) have started to realize the importance of proactive innovation and advance technology to improve competitiveness. The development of new service concepts enables LSPs to increase customer Satisfaction and strengthen their competitiveness. Due to the fact that services cover specific Characteristics, their development differs from traditional product development and requires adapted innovation and advance technology management processes. The production of services usually requires the participation of customers.

Aashishkumar L Sharnangat, M. S. Tufail (2013), describe the development of robotic forklift intended to operate alongside human personnel, handling palletized materials within existing, busy, semi-structured outdoor storage facilities. The robot operates in minimally-prepared, semi structured environments, in which the forklift handles variable palletized cargo using only local sensing, and transports it while interacting with other moving vehicles. The robot operates in close proximity to people, including its human supervisor, other pedestrians who may cross or block its path, and forklift operators who may climb inside the robot and operate it manually.

This is made possible by novel interaction mechanisms that facilitate safe, effective operation around people. Using radio frequency identification (RFID) antennas with forklift trucks to identify goods and stock shelves automatically will help to increase efficiency of logistic processes. This paper discusses different approaches to integrate RFID antennas into a forklift truck. The different influences to RFID systems are discussed by consideration of logistic environments. Different antenna concepts are introduced and benchmarked by using simulation and measurement of electric field strength as well as functional tests.

Peter Kolarovszki, Juraj Vaculík (2013), in his words described this article as RFID technology in conjunction with warehouse management systems. Article also deals with automatic identification and data capture technologies and each processes, which are used in warehouse management system. It describes processes from entering goods into production to identification of goods and also palletizing, storing, bin transferring and removing goods from warehouse. Article focuses on utilizing AMP middleware in WMS processes in Nowadays, the identification of goods in most warehouses is carried through barcodes. In this article we want to specify, how can be processes described above identified through RFID technology. All results are verified by measurement in our AIDC laboratory, which is located at the University of Žilina, and also in Laboratory of Automatic Identification Goods and Services located in GS1 Slovakia. The results of our research bring the new point of view and indicate the ways using of RFID technology in warehouse management system.

Kshitija Deshmukh, Ashitha Ann Santhosh, Yogesh Mane, Saurabh Verma, Sadhana Pai (2015), the improvements that can be made to present day warehouses by making it completely automated. Every single activity related to the warehouse would be performed without any human intervention. The warehouse management system consists of a 3 wheeled robot which navigates through the entire warehouse and transports the cartons from one point to another. The system also provides an efficient, fast and precise inventory management procedure. The dealers access the warehouse by means of an application created specifically for the warehouse

Levaet.al., (2013), in her article analyses customer satisfaction with logistics services; however, considerable attention is paid specifically on their quality. This activity is part of service industry, whose main feature is that the origin of a service is caused by consumer demand and its recognition – by customer satisfaction. Customer satisfaction is very important for logistics companies seeking competitive advantage, because they realize that if they do not satisfy the expectations of customers, their place will be taken by other companies whose activities will be more concentrated on customer expectations. Therefore, logistics companies must ensure every customer service related aspect, no matter what it includes: acceptance of orders, their execution or the solution of problems. A client of a logistics company must be sure that the chosen company understands his needs. Considering this, the article presents the results of the research related to customer satisfaction with logistic services and their quality.

Frank W. Davis and Karl B. Manrodt,(2013) The Council of Logistics Management has commissioned a study to determine the potential of applying logistics principles in service organisations. The authors suggest that logistics principles are even more important in service organisations than in production firms. To realise this potential, however, the definition of logistics must be expanded. Service logistics is defined as the management of activities which respond to customers on an individual basis. The services' historical underpinnings are examined and some guiding concepts central to service response logistics are provided. These concepts include the benefit delivery, delivery processes, delivery orientation, responsive planning, and a customer service model that focuses on individual customer needs.

Azlan et al., (2014) Logistics is a backbone for the global supply chains. In Malaysia, logistics are now recognized as strategic industry that positively contributes to gross domestic product (GDP) and performance of logistics is foremost significant, whereas most of the logistics performance has focused on investigating operational and trade facilitation context. Thus, the purpose of this paper is to examine the issues and reviews by practitioners and found 7 key components that translated it into operations performance objectives. It, thus, provided a base for future research to examine the relationships of this context empirically.

Karin Isaksson and Maria Huge-Brodin, (2013) Awareness of environmental impacts on our society is increasing among companies. In order to turn environmental problems into business opportunities, many companies are beginning to consider how environmental or green aspects can be integrated into their service offerings. This opportunity can be of specific interest to logistics service providers, whose core business is an environmental impact in itself. The purpose of this article is to indicate where green-labelled logistics service providers are positioned today in their development, and to seek the underlying rationale in development of green service offerings. This article takes a logistics service provider's perspective and is based on a multiple case study of 6 companies. The analysis is based on cross-case analysis, and empirical, as well as theoretical, pattern matching. The attitude towards a green approach differs among the case companies: while some are working towards a green integration throughout the entire business, others offer green alternatives to the original service offering. The results point to possible explanations for these differences, and include differences in range of service offerings, size, and to different management principles for green aspects. This article can inspire logistics service providers in their continuing work to integrate green initiatives into the company. By introducing alternative green approaches in the development of service offerings, logistics service providers can match their own business and context with alternative rationales. While most of the green logistics research focuses on the logistics system's characteristics, this article offers initial insights into how the integration of green aspects into logistics services can impact logistics service providers.

Seoket.al., (2016), The study aimed to find out which logistic service factors affect the field and administrative staff's perception of service quality satisfaction. It also tried to find out if there was a difference in perception due to job-type. As the result of analysis, the following implications can be gained. First, independent sample t-test results showed that based on the job types; there is an average difference on economic feasibility, stability, and service satisfaction. Second, the results showed that service quality factors all have a positive influence on service satisfaction. Third, although there was difference in view between field staff and administrative staff on each variable, there was no moderating effect between service quality including each subordinate factors and service satisfaction.

Tseng et.al., (2005) The operation of transportation determines the efficiency of moving products. The progress in techniques and management principles improves the moving load, delivery speed, service quality, operation costs, the usage of facilities and energy saving. Transportation takes a crucial part in the manipulation of logistic. Reviewing the current condition, a strong system needs a clear frame of logistics and a proper transport implements and techniques to link the producing procedures. The objective of the paper is to define the role of transportation in logistics for the reference of further improvement. The research was undertaken to assist logistics managers, researchers and transportation planners to define and comprehend the basic views of logistics and its various applications and the relationships between logistics and transportation.

Maria Rybalko, (2012) The main current focus of supply chain management (SCM) is the creation of longterm, mutually beneficial relationships between a company and other participants in the supply chain. Strategic partnerships are a key factor in the effectiveness of the business of a company as a whole. The market of integrated services in the SCM sphere is developing rapidly, and these services themselves are becoming more complex. A growing market should offer different models of strategic behaviour by suppliers of logistics services. One of these models is that of partnerships. Industry journals and press releases today often report the creation of “logistics partnerships”. In this context, “logistics” is understood as a sphere of strategic importance and the source of competitive advantages, where supply chain participants cooperate closely not only with their suppliers and consumers, but also with providers of logistics services.

Vinh V. Thai, (2013) there has been very little research done in logistics service on how its quality is defined and attributed. In this paper, we aim to explore the definition of the concept of quality in logistics service and its associated dimensions by constructing a conceptual model and test it empirically. A survey was conducted in Singapore with 2,333 logistics service providers and customers from Singapore Logistics Association and Singapore’s National Shipper Council. A total of 171 questionnaires including 86 from logistics service providers and 85 customers were returned. After the process of Exploratory Factor Analysis (EFA) followed by Confirmatory Factor Analysis (CFA), we found that the revised model of five factors and 20 items of logistics service quality is valid and reliable to measure the quality of

logistics service. It was also indicated from the study that quality of customer focus is deemed the most critical to enhance the perceived logistics service quality.

KonstantinosSelviaridis and Martin Spring (2007), to provide taxonomy of third party logistics (3PL) research and, based on that, to develop a research agenda for this field of study. The proposed 3PL research classification framework is based on a comprehensive literature review, which concentrates on peer-reviewed journal papers published within the period 1990-2005. A total of 114 academic sources have been retrieved and analysed in terms of research purpose and nature, method employed, theoretical approach and level of analysis. Findings – The review reveals that 3PL research is empirical-descriptive in nature and that it generally lacks a theoretical foundation. Survey research is the dominant method employed, reflecting the positivist research tradition within logistics. It identifies certain knowledge gaps and develops five propositions for future research. It suggests that focus should be directed towards more normative, theory-driven and qualitative method-based studies. It also argues that further empirical research in relation to 3PL design/implementation and fourth party logistics services is needed. This paper fulfills an identified need for a comprehensive classification framework of 3PL studies. It essentially provides both academics and practitioners with a conceptual map of existing 3PL research and also points out opportunities for future research.

2.2 CONCEPTUAL REVIEW

Technology in Transportation Services



Fig 2.2.1 Advancements in transportation services

E-commerce, globalization, and the digital age have made technology an integrated part of the shipping industry. The interconnected world makes continuous international movement of goods now common practice; this in turn makes trans loading a necessity and a standard of the 21st century global marketplace.

Intermodal transportation has made moving freight over long distances more efficient and more cost effective. When it's done well, products get to the consumer with fewer errors and less cost to all parties involved.

But for intermodal transportation to work well, the latest technology must be employed to ensure that goods are safe and accounted for on each step of the journey. A few major technological advancements are shaping the future of Intermodal transportation. Not only are these innovations making it a safer and more logical way to move goods, but they are laying the groundwork for the next generation of technologies.

Transportation Management Systems

At any given time there are 34 million active containers worldwide. Everything makes its way around the world in them. Vast intermodal freight transportation networks require smart shipping to effectively manage and track movement. Transportation Management Systems (TMS) are essential in making the entire process run smoothly, tracking containers as they move from factories to ships to rail lines to trucks to warehouses.

End-to-end supply chain visibility tools built into TMS platforms allow companies to be more exact, to automate some aspects of the process, and to streamline others. In other words, this technology allows us to virtually travel with shipments in relative real time which is increasingly important as goods are moving across various modes of transportation.

Being able to know where products are every step of the way means that users are able to make better decisions for their business' and bottom lines. Having a strong and usable interface for managing the data accrued over an intermodal process is essential. You are no longer required to do the difficult work of gathering and organizing information from multiple sources: advanced TMS does it all for you.

Accounting departments used to sweat the logistics of intermodal transportation; gathering invoices, bills, rates and other information from a variety of sources was

difficult work. But now with the use of TMS information is easily pulled from various places into a single and easy to use interface.

Smartphone Apps

Smartphones are everywhere, and the power we now hold in these tiny devices revolutionizes how we live. We are more connected than we've ever been and are able to do more from wherever we are..Apps are an important and growing technology used in shipping, and enable a Bring-Your-Own-Device (BYOD) strategy to be applied in gathering data along the way. Apps are a platform that allow workers, drivers, and shippers to use practically any device and to easily input, access, and track important information.

Phones and tablets become the go-to devices used to capture documents, provide electronic point of delivery confirmations, for GPS tracking, and more. Apps improve efficiency and provide timely accurate data at low cost.

Not having to make any large investments in highly specialized hardware means a lower barrier to entry for this technological advance. Portable devices are dependable, inexpensive, and if a particular device goes down for any reason it is easily and quickly replaced.

Container Tracking and Barcode Technology

Barcoding and RFID technology is used in tandem with smartphone apps, utilizing cameras and scanners to read codes making it easier for workers to rapidly collect and upload information on the fly. Track'n Trace technology is a powerful tool enabling users to pull the necessary information from complex supply chains when and where they need it.

Data is sent into the cloud and then accessed remotely as needed through the user interface. The use of barcoding combined with TMS simplifies the process of gathering information from various sources and provides users with fresh data and notifications.

Barcodes and RFID technology are an important layer in the stack of technology making intermodal transportation a strong, reliable, and preferred method for long hauls. Container tracking and barcodes are facilitating the intermodal process and are making it more reliable than ever.

Environmental Data Collection

In 2013 food recalls hit an all-time high. Recalls have a significant financial impact on suppliers and manufacture, and a key factor in ensuring that foods are safe and maintain freshness is temperature control.

The Drug Supply Chain Security Act (DSCSA) now requires manufacturers, repackagers, wholesale distributors, dispensers, and third-party logistics providers to better monitor how drugs travel to avoid environmental issues that can damage the pharmaceuticals enroute.

Stricter regulation of environmentally sensitive goods began in November 2014 and more will continue to be phased in through 2023. The regulations focus on reporting and lot-level product tracing, and require visibility into transaction information and history as shipments move through the various links in the supply chain.

Advanced environmental sensors embedded in containers and warehouses are being used to control and monitor materials as they make their way through various climates in order to prevent loss. TMS can track information such as temperature, humidity, and shock levels throughout the shipping process.

Devices connected to wireless networks deliver upto the minute information on key factors. Remote modulation is then used to make changes from afar that can save cargo from damage due to the elements.

Technology and 3rd Party Logistics Management Success

Using a 3PL that employs the latest market technology is the key differentiator in logistic management success. Transportation management systems, combined with apps that enable quick and easy container tracking, smart data and remote modulation all.

Logistics Industry Getting Ready for the Industry Revolution

Industry 4.0 offers significant opportunities for innovation, added value, and sustainability in our industry. The production transformation will put instant interaction at the center through all steps of the supply chain, allowing communication-driven management of suppliers, warehouses, market shelves, and vehicles on the road, as well as production processes at smart plants. Smart machines will constantly feed information on stock levels, supply chain disruptions, damaged goods, and order or supply level changes. In this manner, processes will be reshaped to ensure efficiency and effective use of productivity.



Fig 2.2.2 Typical model of connected logistics

Logistics 4.0 at Industries

In light of developments in Industry 4.0, Industries is turning data into meaningful information by making objects detectable, performing studies on self-determining technologies, and conducting pilot projects. Industries's R&D operations have put "Logistics 4.0" at the center with digitalization and visualization, process integration through the internet and mobile applications, creating a network among objects, and efforts aimed at cloud computing and communications technologies, and simulation and robotic systems.

Smart Systems-Based Communications Network

The company plans an evolution from satellite-tracked vehicle tracking technology towards smart systems – in which vehicles are in communication with other vehicles in conjunction with traffic and road condition information, and various sensor data regarding the vehicle and the load, with which route and location updates are set autonomously for each vehicle. For this purpose, Industries is implementing device design and process and software development by utilizing internal resources in collaboration with academic stakeholders and international institutes, while also conducting work to build communication networks not only for tow trucks, but also for containers and trailers.

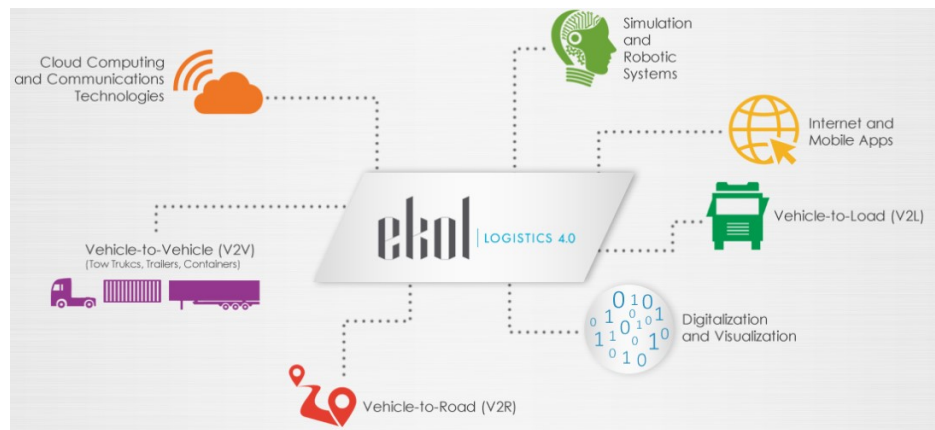


Fig 2.2.3 Logistics 4.0”model

State-of-the-Art Technologies for Automated Warehouses

Industries employs “Logistics 4.0” to enhance warehousing technologies, which are equipped with automation systems widely utilized in current operations, with face-recognition technologies and sound or light-direction systems so as to increase human-machine interaction. Industries carries out work and implements pilot projects for warehousing technologies to comply with Industry 4.0 by introducing automatically directed storage tools, smart shelf and storage units, and self-routing automation components.

New Transportation Management System with a Logistics 4.0 Approach

Industries put together a new project team and commenced work to create a new modern-technology Transportation Management System (TMS), which is set to make its mark in the digital world, allowing for significantly high system direction in making operational decisions based on personal configuration, and interacting with all stakeholders. The company’s future projects do include designing a novel and modern corporate data warehousing environment to allow for big data analysis in the near future.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

Research is carried out within most occupations. It is a way of accepted level-headedness when compared to a set of skills, examining significantly the various facets of your professional work. It is a habit of inquiring what is being done and is logically assessed using the observed information finding answers to bring in appropriate changes for a better professional service. The methodological analysis of Research is a path to analytically solve the research issues. It may be inexplicit as a portion of studying how research is performed scientifically. In the study, the various methods and measures are adopted by a researcher in analyzing the research problem in line with the logic guiding the research. It is essential to know not only the research methods/techniques but the mode in which this will be carried out. They should be able to evaluate the research by developing tests. It is also important that the assumptions underlying the different techniques should be understood and be aware of the standards to decide the technique and procedures.

In order to satisfy the objectives, the descriptive research methodology is doled out. The main aim of descriptive procedure is to give a description of the as-is state of affairs. Hence it will be most suitable for the analysis taken for study. The actual scenario on Transportation prevailing in Logistics companies is studied by collecting opinion from the customers of Logistics Companies and analysed to know the results. The main features of this methodology is that the researcher has no control over the elements, but can only report what has been happening or what was found during the study. The primary aim is to study the effect of transportation on the customers of Logistics companies. The data collected will be analysed and results will be ascertained. There is no control whatsoever on the elements and attributes. Research is carried out within most occupations. It is a way of accepted level-headedness when compared to a set of skills, examining significantly the various facets of your professional work. In order to satisfy the objectives, the descriptive research methodology is doled out. The main aim of descriptive procedure is to give a description of the as-is state of affairs. Hence it will be most suitable for the analysis taken for study. The actual scenario on Transportation prevailing in

Logistics companies is studied by collecting opinion from the customers of Logistics companies and analysed to know the results. The main features of this methodology is that the researcher has no control over the elements, but can only report what has been happening or what was found during the study. The chi- square test is applied to nominal data. Nominal data set is a set of information organized by category or name. Chi-Square is a statistical test commonly used to compare observed data with the data we would expect to obtain according to a specific hypothesis. Using this test we can compare the data collected with the expected data and draw the Interpretation from it.

Descriptive research includes surveys and fact-finding enquires of different kinds. The major purpose of descriptive research is description of the state of affairs as it exists at present. The main characteristic of this method is that the researcher has no control over the variables; he can only report what has happened or what is happening. This project involves descriptive research for data collection.

3.2 SAMPLE SIZE

The respondents were selected randomly from the Chennai customer list provided by the company.

Sample Size The research questions are set to be asked to the 150 employees of Client organizations of logistics companies.

3.3 SAMPLING TECHNIQUE

A Sampling frame is the set of source materials from which the sample is selected. The purpose of sampling framework is to provide a means for choosing particular members of the target population that are to be interviewed during the data collection. The sample frame must be the representative of the population. Here, the target population is the people working in Logistics companies. The sampling frames are chosen such that it covers all the departments' customers of Logistics companies. Sampling can be defined as the section of some part of an aggregate or totality on the basis of which judgment or an inference about aggregate or totality is made.

3.4 SOURCES OF DATA

Primary data Primary data was collected with the help of questionnaire survey with the customers of Logistics companies.

Secondary data Secondary data was collected by external sources like books, newspapers and journals; new age sources like the internet. Some White papers and articles were also referred to get an insight on the working of plans designed for road transportation. Access to different articles with respect to road transport on the internet enabled to gather some useful information and facts about the same. This study is totally secondary data based one

Questionnaire is the source of data collection. The questionnaire is prepared with suitable questions and distributed among the customers of Logistics companies. The data is collected from all categories of customers. The sample size is defined as 150. The data collection is done such that the responses are got from almost equal number of both male and female respondents. Also respondents are chosen such that they spend varying amount of years in this company. This helps us to know about what the impact on them in the beginning is and how it varies over a period of time. The questionnaire is prepared and distributed among the people who were employed in Logistics companies. The questionnaire is distributed to customers with varying designations and with varying years of experience.

3.5 ANALYTICAL TOOLS

Percentage Method Percentage refers to special kind of ratio that is used in making comparison between two or more series of data. Percentage can also be used to compare between two or more series of data. Percentage can also be used to compare the relative item that is distribution of two or more series of data. This method is mainly used as comparative study.

Weighted Average Method The weighted mean is similar to an arithmetic mean (the most common type of average), where instead of each of the data points contributing equally to the final average, some data points contribute more than others. The notion of weighted mean plays a role in descriptive statistics and also occurs in a more general form in several other areas of research. In this research

this calculation is done to analyze the performance of services provided by Logistics companies

Chi-Square Method The χ^2 test (chi-square test) is one of the simplest and most widely used non-parametric tests in statistical work.

3.6 LIMITATIONS OF THE STUDY

- ✚ The results obtained from this study cannot be generalized to a wide range of similar situations concerning industrial infrastructure companies because of the random sampling technique used even though the methodology used in this study could be applied to these similar situations.
- ✚ The issue of consumers' perceptions could be questioned because the sample size consisted of respondents that come from client companies that may differ.
- ✚ Carrying out this study on different client companies of different sizes could be a limitation because consumers could expect more from bigger companies than smaller ones.

CHAPTER 4

DATA ANALYSIS & INTERPRETATION

4.1 Percentage Analysis:

Table 4.1.1 Table showing age of the respondents

Particulars	Frequency	Percentage (%)
20-30 Years	16	13.3
31-40 Years	7	5.8
41-50 Years	74	61.7
51-60 Years	13	10.8
More than 60 Years	10	8.3
Total	120	100.0

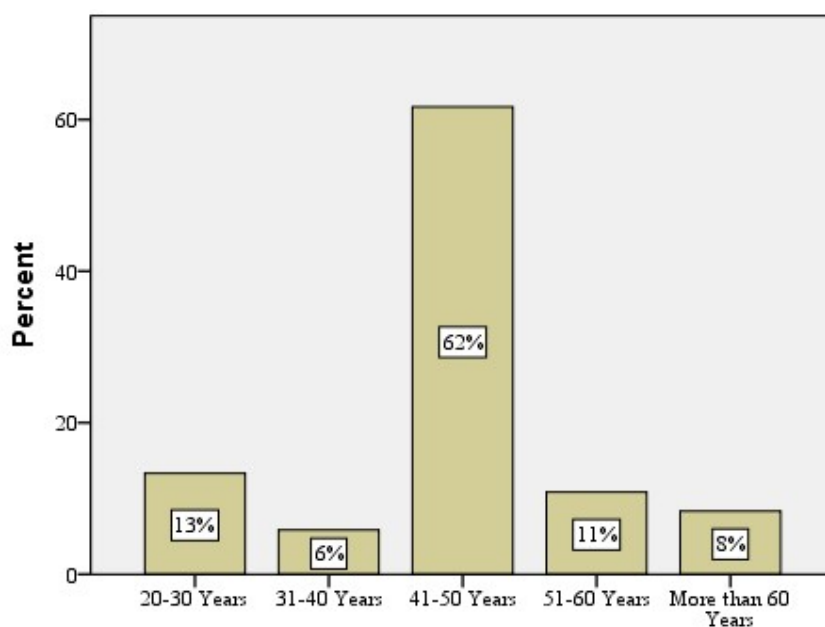


Chart 4.1.1 Chart representing age of the respondents

Interpretation

13% of the respondents are in the age group of 20-30 years, 6% of them are 31-40 years old, 62% of them are 41-50 years old, 11% of them are 51-60 years old and rest 8% respondents are more than 6 years old.

Inference

Majority 62% of the people age group between 41-50 years were responded.

Table 4.1.2 Table showing years of existence in the business

Particulars	Frequency	Percentage (%)
Less than 2 Years	59	49.2
2-5 Years	34	28.3
5-10 Years	15	12.5
10-15 Years	8	6.7
More than 15 Years	4	3.3
Total	120	100.0

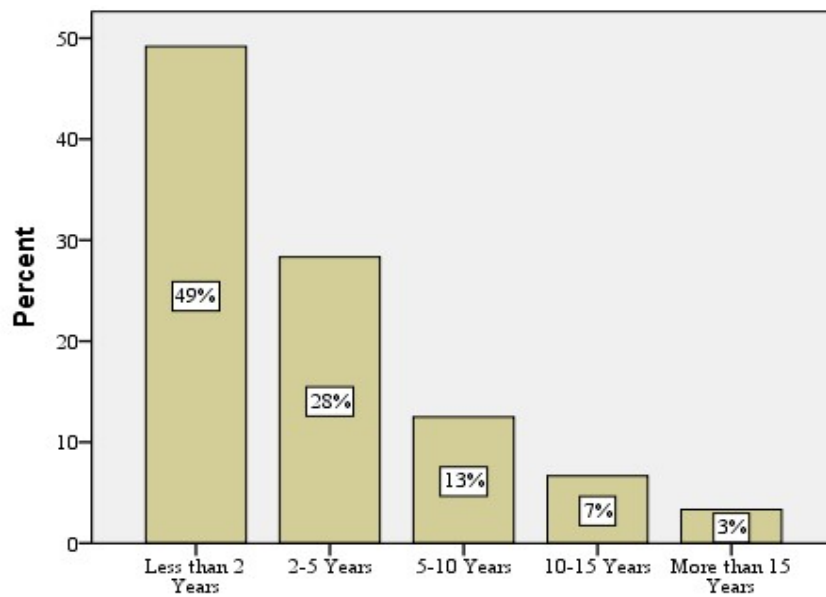


Chart 4.1.2 Chart representing years of existence in the business

Interpretation

49% of the respondents are having less than 2 years of experience, 28% of the respondents are having 2-5 years of experience in logistics business, 13% of the respondents have 5-10 years of experience in logistics business, 7% of them have 10-15 years and rest 3% are having more than 15 years of experience in logistics business.

Inference

Majority 49% of the respondents are having less than 2 years of experience in logistics business.

Table 4.1.3 Table showing type of the company

Particulars	Frequency	Percentage (%)
Exporter-Trader	86	71.7
Exporter-Manufacturer	4	3.3
Importer-Trader	22	18.3
Importer –Manufacturer	4	3.3
Others	4	3.3
Total	120	100.0

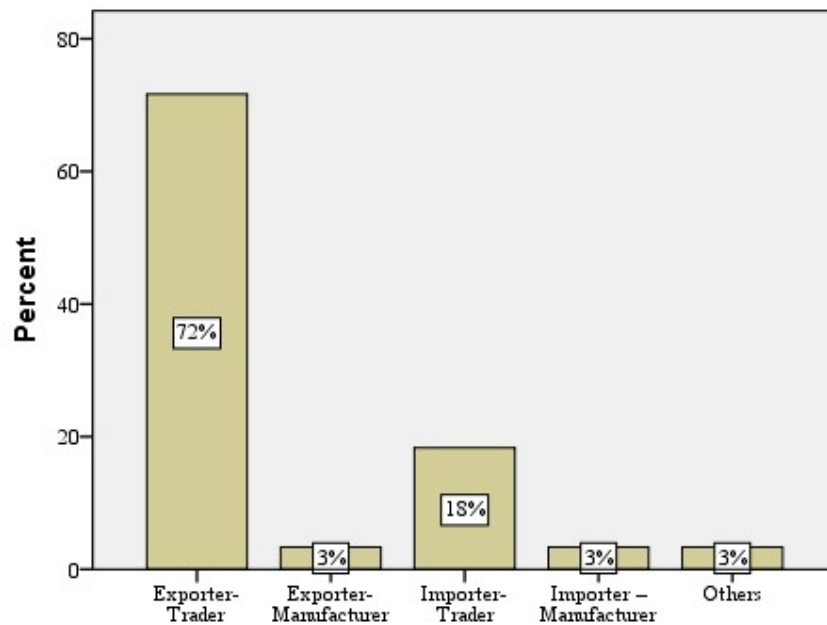


Chart 4.1.3 Chart representing type of the company

Interpretation

72% of the respondents are exporter-trader, 3% of them are exporter-Manufacturer, 18% of them are importer-trader, 3% of them are importer manufacturer and rest 3%

respondents are other category respondents.

Inference

Majority 72% of the respondents are exporter trader where rest of the respondents falls under other category.

Table 4.1.4 Table showing service availed

Particulars	Frequency	Percentage (%)
International Freight Forwarding	35	29.2
Cargo Consolidation	19	15.8
Cargo Warehousing	19	15.8
Container Handling Agents	25	20.8
Domestic Freight Forwarding	7	5.8
Customs Clearance	8	6.7
Forwarding Agent	4	3.3
Air & Sea Cargo Handling Service	3	2.5
Total	120	100.0

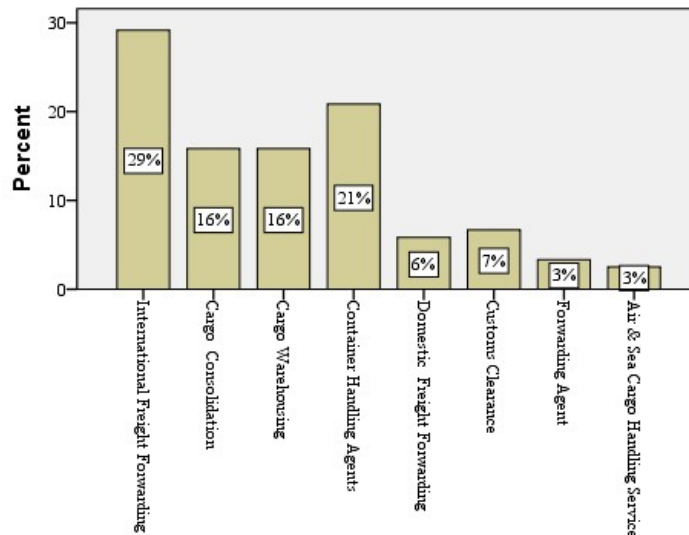


Chart 4.1.4 Chart representing service availed

Interpretation

29% of the respondents are getting international freight forwarding services, 16% of them are using cargo consolidation services, 16% of them are using cargo warehousing services, 21% of them are using the company as container handling agents, 6% of them are using the services of domestic freight forwarding, 7% of them are using the services of the company for customs clearance, 3% as forwarding agents and the rest 3% of them as air & sea cargo handling service.

Inference

Majority 29% of the respondents are getting international freight forwarding services whereas other respondent using other services.

Table 4.1.5 Table showing frequency of shipments taking place

Particulars	Frequency	Percentage (%)
Yearly	23	19.2
Monthly	8	6.7
Fortnightly	84	70.0
Weekly	4	3.3
Daily	1	.8
Total	120	100.0

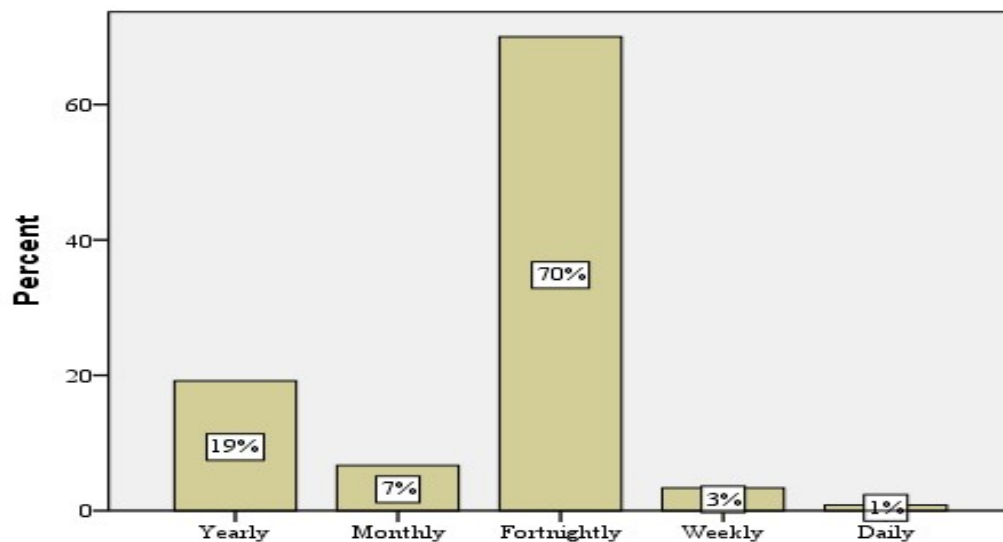


Chart 4.1.5 Chart representing frequency of shipments taking place

Interpretation

19% of the respondents involved in yearly shipments, 7% of the respondents do monthly shipments, 70% said fortnightly, 3% said weekly and 1% do daily shipments.

Inference

Majority 19% of the respondents involved in yearly shipments whereas other respondents take place in different shipment schedules.

Satisfaction towards the efficiency of internal operations

Table 4.1.6 Table showing answers to the customer queries

Particulars	Frequency	Percentage (%)
Highly Satisfied	13	10.8
Satisfied	36	30.0
Neutral	60	50.0
Dissatisfied	8	6.7
Highly Dissatisfied	3	2.5
Total	120	100.0

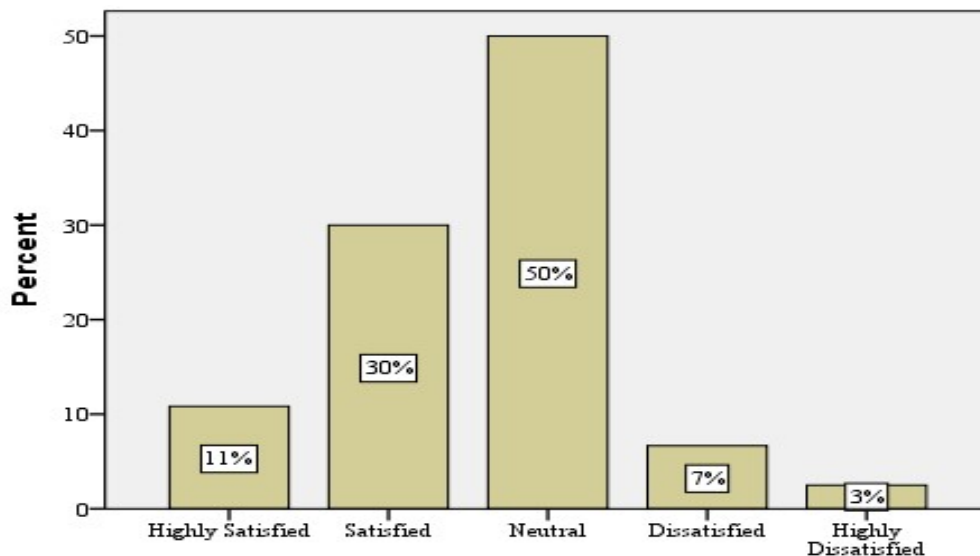


Chart 4.1.6 Chart representing answers to the customer queries

Interpretation

11% of the respondents are highly satisfied with the answers to the customer queries, 30% of them are satisfied, 50% respondents are neutral towards this, 7% of them are dissatisfied and rest 3% of them are highly dissatisfied .

Inference

Majority 11% of the respondents are highly satisfied with the answers to the customer queries whereas other respondents where dissatisfied.

Table 4.1.7 Table showing staff's efficiency

Particulars	Frequency	Percentage (%)
Highly Satisfied	71	59.2
Satisfied	29	24.2
Neutral	7	5.8
Dissatisfied	9	7.5
Highly Dissatisfied	4	3.3
Total	120	100.0

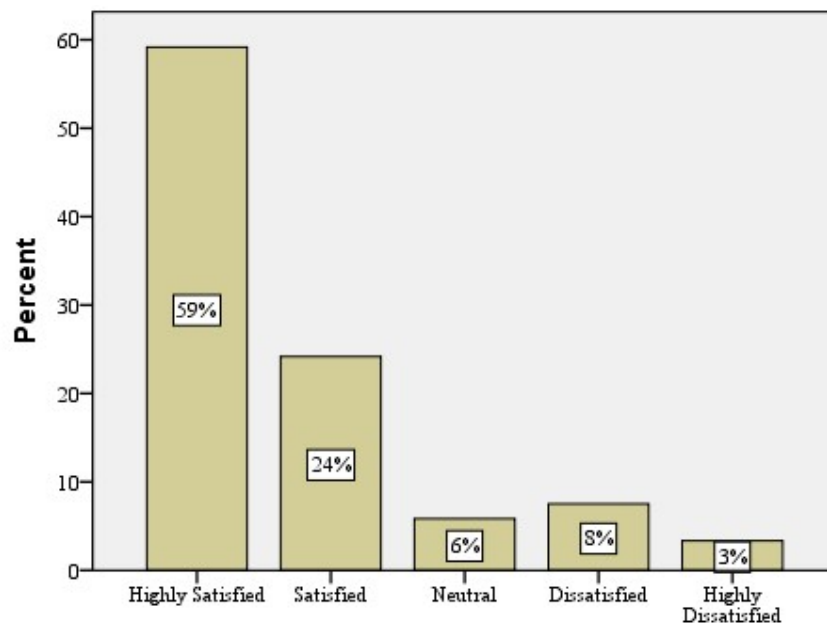


Chart 4.1.7 Chart representing staff's efficiency

Interpretation

59% of the respondents are highly satisfied with staff's efficiency, 24% of them are satisfied, 6% respondents are neutral towards this, 8% of them are dissatisfied and rest 3% of them are highly dissatisfied.

Inference

Majority 59% of the respondents are highly satisfied with staff's efficiency where rest of the respondents are dissatisfied.

Table 4.1.8 Table showing company updated with new technology

Particulars	Frequency	Percentage (%)
Highly Satisfied	17	14.2
Satisfied	64	53.3
Neutral	29	24.2
Dissatisfied	7	5.8
Highly Dissatisfied	3	2.5
Total	120	100.0

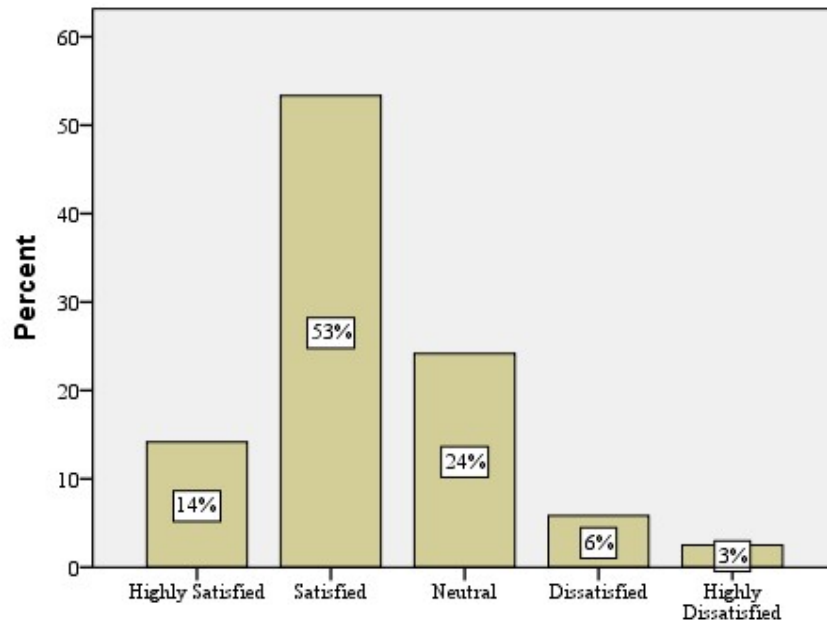


Chart 4.1.8 Chart representing company updated with new technology

Interpretation

14% of the respondents are highly satisfied with the company's update of new technology, 53% of them are satisfied, 24% respondents are neutral towards this, 6% of them are dissatisfied and rest 3% of them are highly dissatisfied.

Inference

Majority 14% of the respondents are highly satisfied with the company's update of new technology whereas other respondents are dissatisfied.

Table 4.1.9 Table showing aligned and arranged customer records

Particulars	Frequency	Percentage (%)
Highly Satisfied	14	11.7
Satisfied	40	33.3
Neutral	57	47.5
Dissatisfied	5	4.2
Highly Dissatisfied	4	3.3
Total	120	100.0

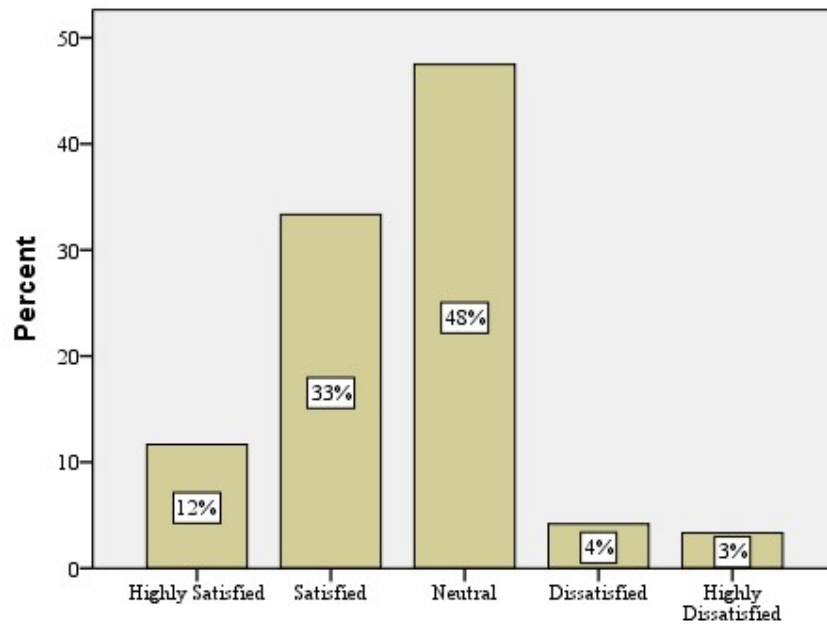


Chart 4.1.9 Chart representing aligned and arranged customer records

Interpretation

12% of the respondents are highly satisfied with the aligned and arranged customer records, 33% of them are satisfied, 48% respondents are neutral towards this, 4% of them are dissatisfied and rest 3% of them are highly dissatisfied.

Inference

Majority 12% of the respondents are highly satisfied with the aligned and arranged customer records where others are dissatisfied.

Table 4.1.10 Table showing easy tracking of transshipped goods

Particulars	Frequency	Percentage (%)
Highly Satisfied	35	29.2
Satisfied	30	25.0
Neutral	32	26.7
Dissatisfied	20	16.7
Highly Dissatisfied	3	2.5
Total	120	100.0

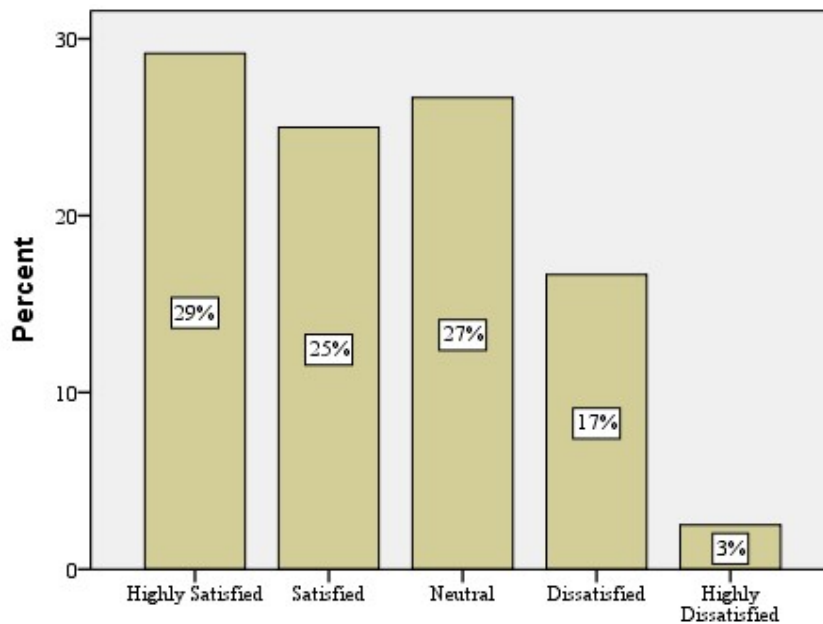


Chart 4.1.10 Chart representing easy tracking of transshipped goods

Interpretation

29% of the respondents are highly satisfied with the easy tracking of transshipped goods, 25% of them are satisfied, 27% respondents are neutral towards this, 17% of them are dissatisfied and rest 3% of them are highly dissatisfied.

Inference

Majority 29% of the respondents are highly satisfied with the easy tracking of transshipped goods whereas others are dissatisfied.

Satisfaction towards the services provided

Table 4.1.11 Table showing checking of goods are done prior to booking

Particulars	Frequency	Percentage (%)
Highly Satisfied	20	16.7
Satisfied	33	27.5
Neutral	58	48.3
Dissatisfied	5	4.2
Highly Dissatisfied	4	3.3
Total	120	100.0

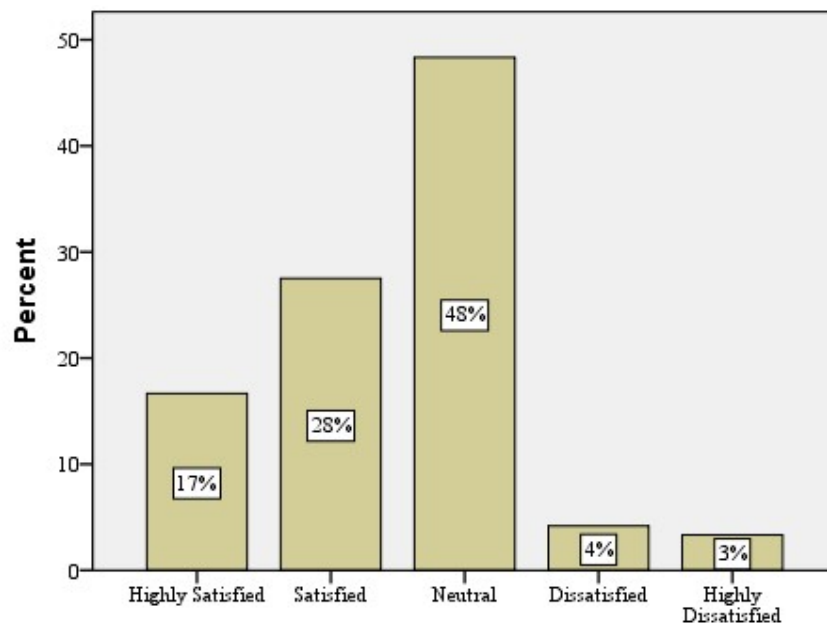


Chart 4.1.11 Chart representing checking of goods are done prior to booking

Interpretation

34% of the respondents are highly satisfied with the checking process done before booking of goods, 28% of them are satisfied, 48% respondents are neutral towards this, 4% of them are dissatisfied and rest 3% of them are highly dissatisfied.

Inference

Majority 34% of the respondents are highly satisfied with the checking process done before booking of goods where rest of the others are dissatisfied.

Table 4.1.12 Table showing booking process takes less time

Particulars	Frequency	Percentage (%)
Highly Satisfied	14	11.7
Satisfied	46	38.3
Neutral	50	41.7
Dissatisfied	6	5.0
Highly Dissatisfied	4	3.3
Total	120	100.0

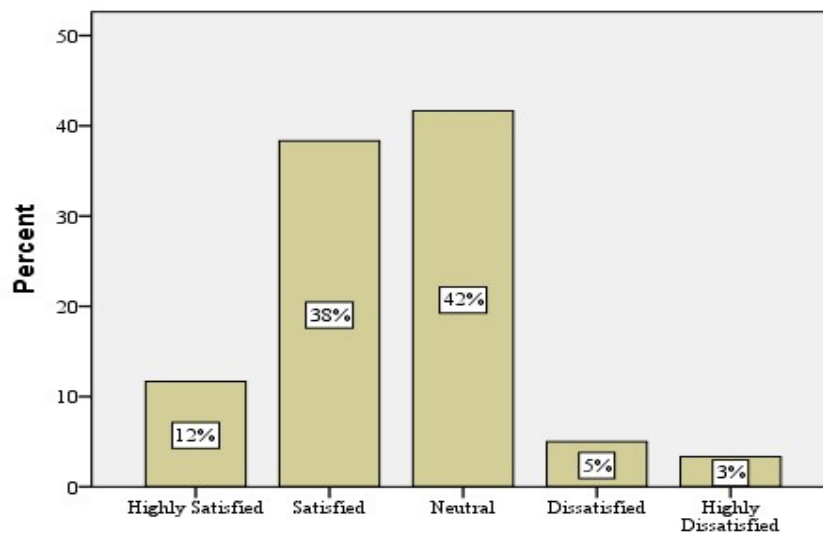


Chart 4.1.12 Chart representing booking process takes less time

Interpretation

12% of the respondents are highly satisfied with the lesser time taken for booking process, 38% of them are satisfied, 42% respondents are neutral towards this, 5% of them are dissatisfied and rest 3% of them are highly dissatisfied.

Inference

Majority 12% of the respondents are highly satisfied with the lesser time taken for booking process where rest of the others are dissatisfied.

Table 4.1.13 Table showing warehouse is completely equipped

Particulars	Frequency	Percentage (%)
Highly Satisfied	14	11.7
Satisfied	39	32.5
Neutral	58	48.3
Dissatisfied	7	5.8
Highly Dissatisfied	2	1.7
Total	120	100.0

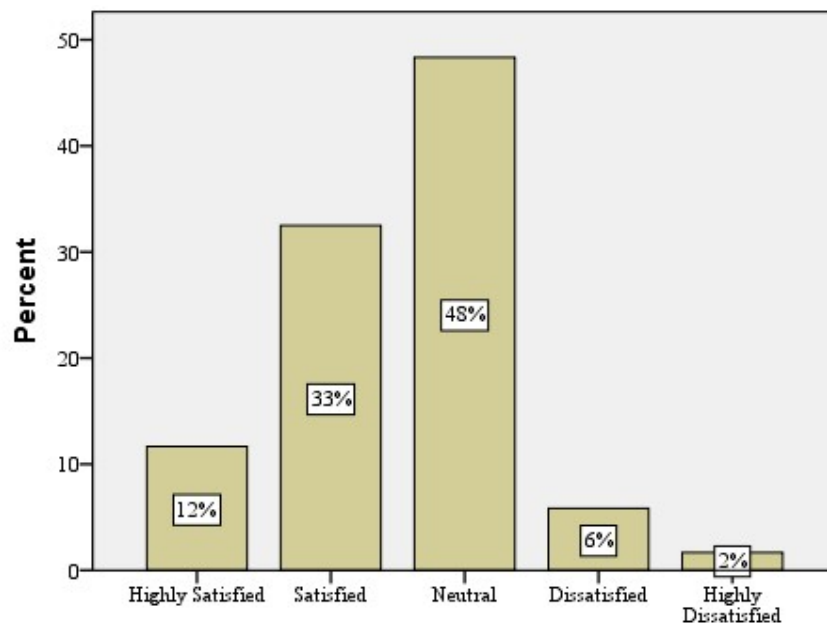


Chart 4.1.13: Chart representing warehouse is completely equipped

Interpretation

12% of the respondents are highly satisfied with the complete equipped warehouses, 33% of them are satisfied, 48% of them are neither satisfied nor dissatisfied, 6% of them are dissatisfied and rest 2% of them are highly dissatisfied.

Inference

Majority 12% of the respondents are highly satisfied with the complete equipped warehouses whereas others are dissatisfied.

Table 4.1.14 Table showing delivery speed is high

Particulars	Frequency	Percentage (%)
Highly Satisfied	68	56.7
Satisfied	35	29.2
Neutral	15	12.5
Dissatisfied	1	.8
Highly Dissatisfied	1	.8
Total	120	100.0

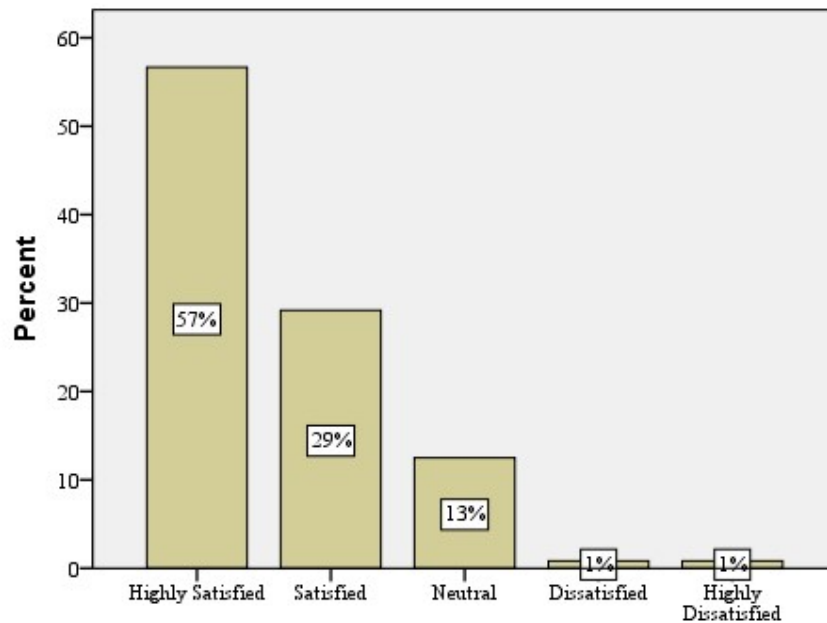


Chart 4.1.14: Chart representing shipping is done quickly

Interpretation

57% of the respondents are highly satisfied with the quick shipping done, 29% of them are satisfied, 13% of them are neither satisfied nor dissatisfied, 1% of them are dissatisfied and rest 1% of them are highly dissatisfied.

Inference

Majority 57% of the respondents are highly satisfied with the quick shipping done where rest of the others are dissatisfied.

Table 4.1.15 Table showing delivery speed is high

Particulars	Frequency	Percentage (%)
Highly Satisfied	12	10.0
Satisfied	36	30.0
Neutral	63	52.5
Dissatisfied	5	4.2
Highly Dissatisfied	4	3.3
Total	120	100.0

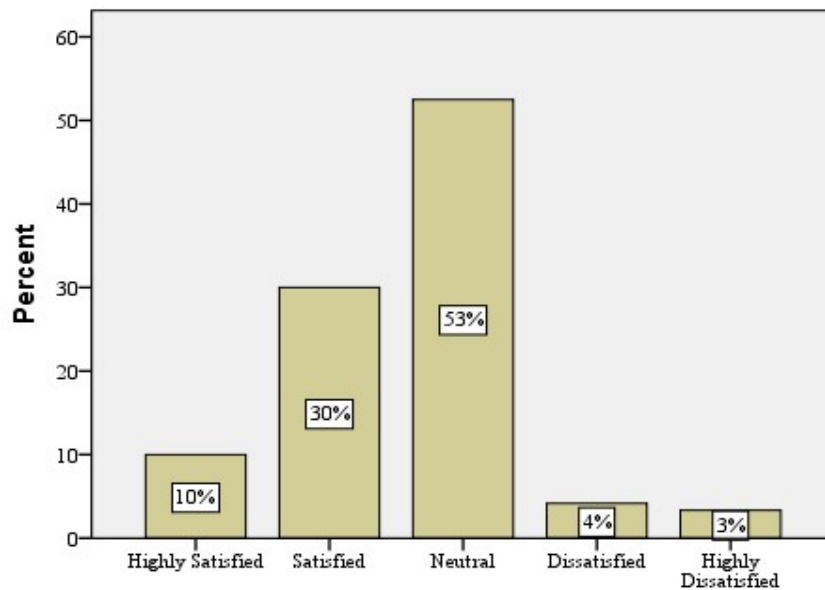


Chart 4.1.15 Chart representing delivery speed is high

Interpretation

10% of the respondents are highly satisfied with the high delivery speed, 30% of them are satisfied, 53% of them are neither satisfied nor dissatisfied, 4% of them are dissatisfied and rest 3% of them are highly dissatisfied.

Inference

Majority 10% of the respondents are highly satisfied with the high delivery speed where rest of the others are dissatisfied.

Changes that are expected from the company

Table 4.1.16 Table showing on time product delivery expected from the company

Particulars	Frequency	Percentage (%)
Strongly Agree	17	14.2
Agree	48	40.0
Neutral	45	37.5
Disagree	6	5.0
Strongly Disagree	4	3.3
Total	120	100.0

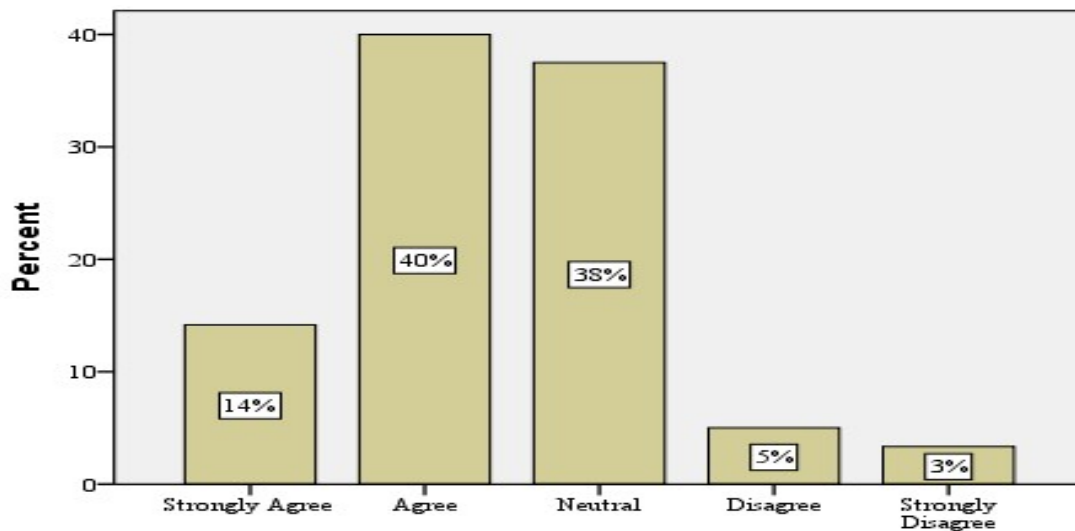


Chart 4.1.16 Chart representing on time product delivery expected from the company

Interpretation

14% of the respondents strongly agree that on time product delivery is expected from the company, 40% of them agree with this, 38% of them are neither agree nor disagree this, 5% of them disagree and rest 3% of them are strongly disagree

Inference

Majority 14% of the respondents strongly agree that on time product delivery is expected from the company where others disagree.

Table 4.1.17 Table showing resource fluency expected from the company

Particulars	Frequency	Percentage (%)
Strongly Agree	9	7.5
Agree	35	29.2
Neutral	63	52.5
Disagree	7	5.8
Strongly Disagree	6	5.0
Total	120	100.0

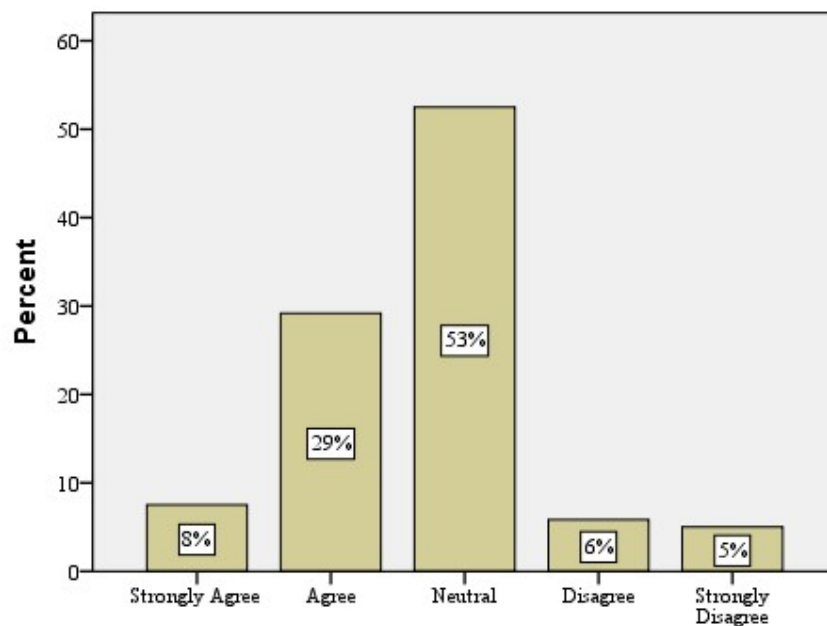


Chart 4.1.17 Chart representing resource fluency expected from the company

Interpretation

8% of the respondents strongly agree that resource fluency is expected from the company, 29% of them agree with this, 53% of them are neither agree nor disagree this, 6% of them disagree and rest 5% of them are strongly disagree.

Inference

Majority 8% of the respondents strongly agree that resource fluency is expected from the company where others disagree.

Table 4.1.18 Table showing ensuring complete satisfaction on services is expected from the company

Particulars	Frequency	Percentage (%)
Strongly Agree	11	9.2
Agree	39	32.5
Neutral	63	52.5
Disagree	4	3.3
Strongly Disagree	3	2.5
Total	120	100.0

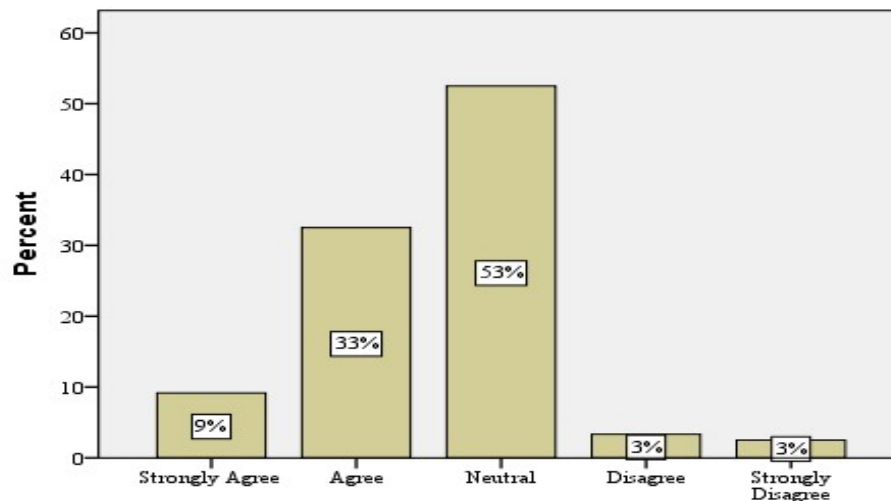


Chart 4.1.18 Chart representing ensuring complete satisfaction on services is expected from the company

Interpretation

9% of the respondents strongly agree that the organization ensure complete satisfaction on services, 33% of them agree with this, 53% of them are neither agree nor disagree this, 3% of them disagree and rest 3% of them are strongly disagree with this

Inference

Majority 9% of the respondents strongly agree that the organization ensure complete satisfaction on services where others disagree.

Table 4.1.19 Table showing individual customer attention expected from the company

Particulars	Frequency	Percentage (%)
Strongly Agree	18	15.0
Agree	47	39.2
Neutral	46	38.3
Disagree	7	5.8
Strongly Disagree	2	1.7
Total	120	100.0

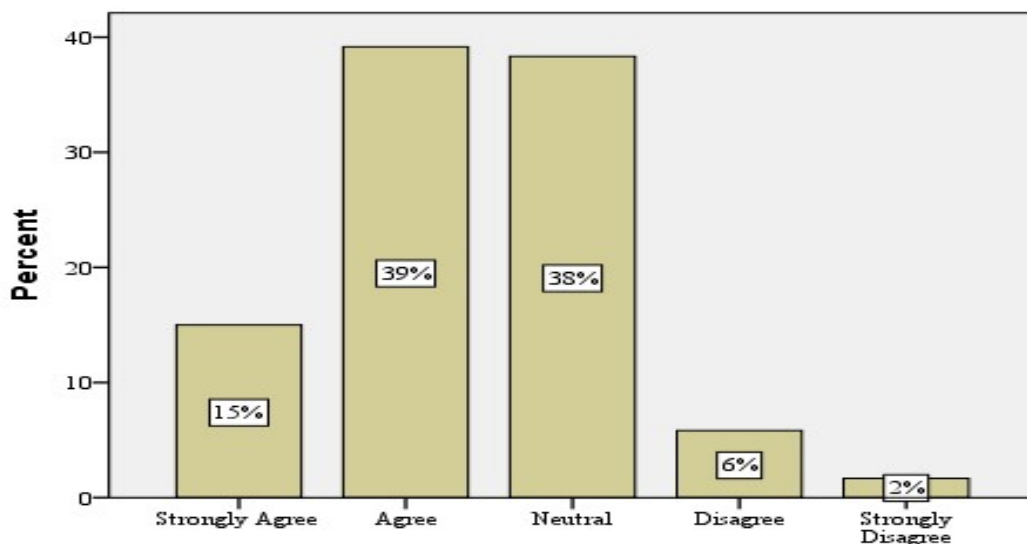


Chart 4.1.19 Chart representing individual customer attention expected from the company

Interpretation

15% of the respondents strongly agree that giving individual attention to customers, 39% of them agree with this, 38% of them are neither agree nor disagree this, 6% of them disagree and rest 2% of them are strongly disagree with this.

Inference

Majority 15% of the respondents strongly agree that giving individual attention to customers where others disagree.

Table 4.1.20 Table showing operating hours are to be convenient

Particulars	Frequency	Percentage (%)
Strongly Agree	11	9.2
Agree	32	26.7
Neutral	67	55.8
Disagree	6	5.0
Strongly Disagree	4	3.3
Total	120	100.0

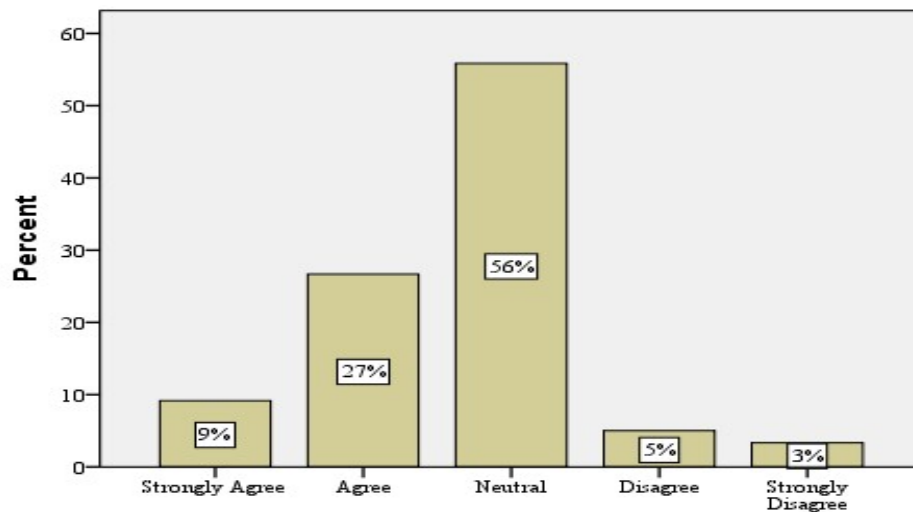


Chart 4.1.20 Chart representing operating hours are to be convenient

Interpretation

9% of the respondents strongly agree that convenient operating hours are expected from the organization, 27% of them agree with this, 56% of them are neither agree nor disagree this, 5% of them disagree and rest 3% of them are strongly disagree.

Inference

Majority 9% of the respondents strongly agree that convenient operating hours are expected from the organization where others disagree.

Overall satisfaction towards booking and delivery process of Logistics companies

Table 4.1.21 Table showing documentation work on shipment

Particulars	Frequency	Percentage (%)
Highly Satisfied	21	17.5
Satisfied	42	35.0
Neutral	47	39.2
Dissatisfied	6	5.0
Highly Dissatisfied	4	3.3
Total	120	100.0

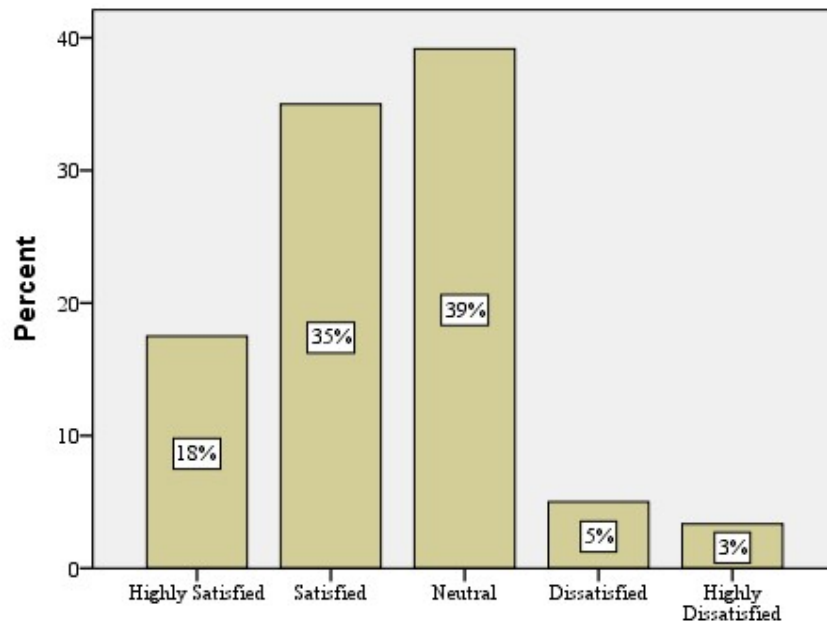


Chart 4.1.21 Chart representing documentation work on shipment

Interpretation

18% of the respondents said they are highly satisfied with the documentation work on shipment, 35% of them said they are satisfied, 39% said they are neither satisfied nor dissatisfied with this, 5% of them are dissatisfied and rest 3% of them are highly dissatisfied .

Inference

Majority 18% of the respondents said they are highly satisfied with the documentation work on shipment whereas others are dissatisfied.

Table 4.1.22 Table showing price card for the services

Particulars	Frequency	Percentage (%)
Highly Satisfied	11	9.2
Satisfied	33	27.5
Neutral	66	55.0
Dissatisfied	6	5.0
Highly Dissatisfied	4	3.3
Total	120	100.0

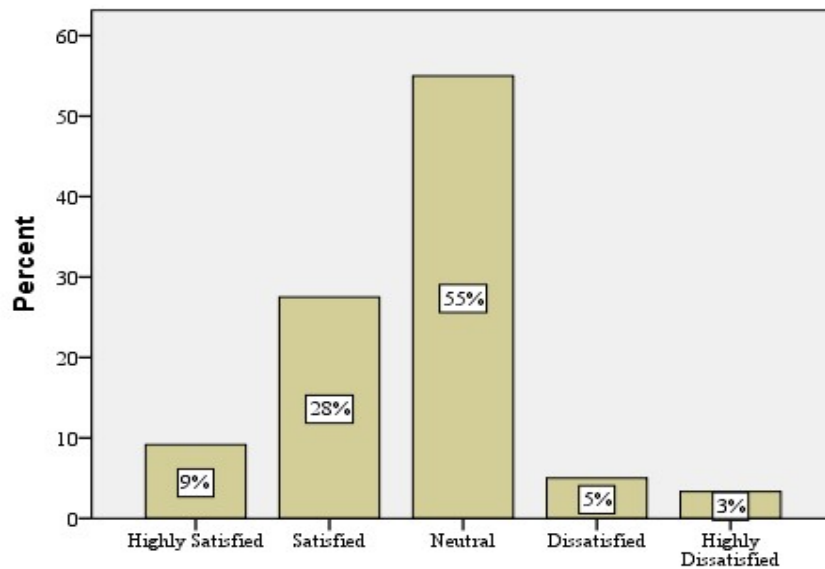


Chart 4.1.22 Chart representing price card for the services

Interpretation

9% of the respondents said they are highly satisfied with the price card for the services, 28% of them said they are satisfied, 55% said they are neither satisfied nor dissatisfied with this, 5% of them are dissatisfied and rest 3% of them are highly dissatisfied.

Inference

Majority 9% of the respondents said they are highly satisfied with the price card for the services where rest of the others are dissatisfied.

Table 4.1.23 Table Showing safety of products during transmit

Particulars	Frequency	Percentage (%)
Highly Satisfied	17	14.2
Satisfied	39	32.5
Neutral	52	43.3
Dissatisfied	7	5.8
Highly Dissatisfied	5	4.2
Total	120	100.0

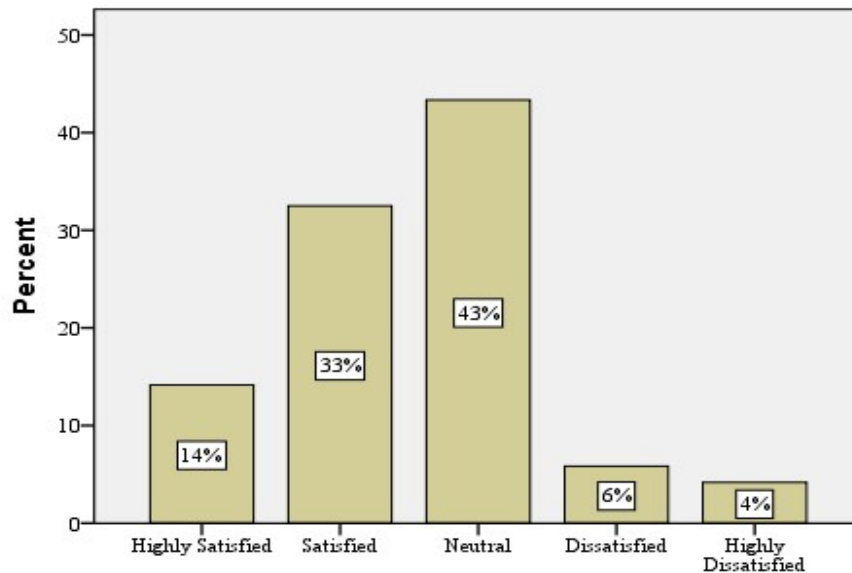


Chart 4.1.23 Chart representing safety of products during transmit

Interpretation

14% of the respondents said they are highly satisfied with the safety of products during transmit, 33% of them said they are satisfied, 43% said they are neither satisfied nor dissatisfied with this, 6% of them are dissatisfied and rest 4% of them are highly dissatisfied.

Inference

Majority 14% of the respondents said they are highly satisfied with the safety of products during transmit whereas others are dissatisfied.

Table 4.1.24 Table showing insurance coverage for shipment

Particulars	Frequency	Percentage (%)
Highly Satisfied	9	7.5
Satisfied	40	33.3
Neutral	59	49.2
Dissatisfied	8	6.7
Highly Dissatisfied	4	3.3
Total	120	100.0

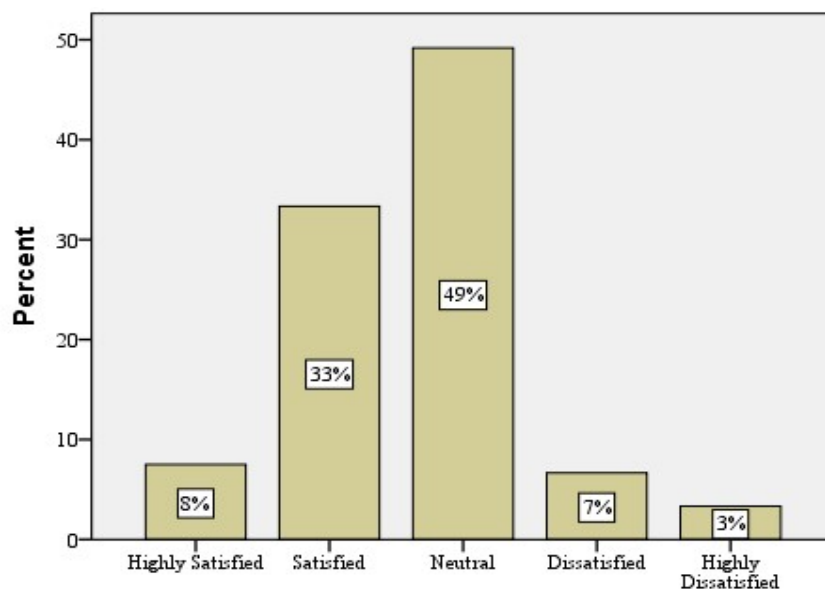


Chart 4.1.24 Chart representing insurance coverage for shipment

Interpretation

8% of the respondents said they are highly satisfied with the insurance coverage for shipment, 33% of them said they are satisfied, 49% said they are neither satisfied nor dissatisfied with this, 7% of them are dissatisfied and rest 3% of them are highly dissatisfied.

Inference

Majority 8% of the respondents said they are highly satisfied with the insurance coverage for shipment where rest of the others are dissatisfied.

Table 4.1.25 Table Showing delivery time of the product

Particulars	Frequency	Percentage (%)
Highly Satisfied	17	14.2
Satisfied	36	30.0
Neutral	57	47.5
Dissatisfied	7	5.8
Highly Dissatisfied	3	2.5
Total	120	100.0

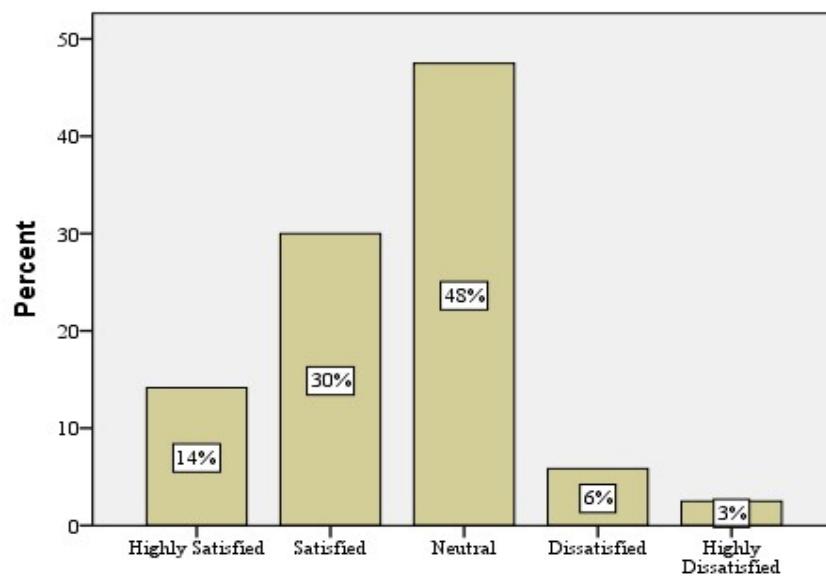


Chart 4.1.25 Chart representing delivery time of the product

Interpretation

14% of the respondents said they are highly satisfied with insurance coverage for shipment, 30% of them said they are satisfied, 48% said they are neither satisfied nor dissatisfied with this, 6% of them are dissatisfied and rest 3% of them are highly dissatisfied .

Inference

Majority 14% of the respondents said they are highly satisfied with insurance coverage for shipment whereas others are dissatisfied.

4.2 CHI SQUARE TEST

H_0 (Null hypothesis) = There is no significant relationship between age of respondents and their expectation from logistics organization on showing individual attention to customers

H_1 (Alternate hypothesis) = There is a significant relationship between age of respondents and their expectation from logistics organization on showing individual attention to customers

Age * Individual Cross tabulation								
			Individual attention to customers					Total
			Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
Age of respondents	20-30 Years	Count	4	4	7	1	0	16
		Expected Count	2.4	6.3	6.1	.9	.3	16.0
	31-40 Years	Count	0	2	4	1	0	7
		Expected Count	1.1	2.7	2.7	.4	.1	7.0
	41-50 Years	Count	11	33	23	5	2	74
		Expected Count	11.1	29.0	28.4	4.3	1.2	74.0
	51-60	Count	3	5	5	0	0	13

	Years	Expected Count	2.0	5.1	5.0	.8	.2	13.0
	More than 60 Years	Count	0	3	7	0	0	10
		Expected Count	1.5	3.9	3.8	.6	.2	10.0
Total		Count	18	47	46	7	2	120
		Expected Count	18.0	47.0	46.0	7.0	2.0	120.0

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.931 ^a	16	.604
Likelihood Ratio	17.597	16	.348
Linear-by-Linear Association	.061	1	.805
N of Valid Cases	120		
a. 19 cells (76.0%) have expected count less than 5. The minimum expected count is .12.			

Calculated value = 0.604

Calculated value > Table value

H₀ is accepted.

Interpretation

Hence, there is no relationship between age of respondents and their expectation from logistics organization on showing individual attention to customers

4.3 CORRELATION

A Pearson product-moment correlation was run to determine the relationship between the selected variables

		Correlations				
		Updated	Warehouse	Documentation	Operating	Individual
Updated	Pearson Correlation	1	.210*	.329**	-.049	.352**
	Sig. (2-tailed)		.021	.000	.592	.000
	N	120	120	120	120	120
Warehouse	Pearson Correlation	.210*	1	.658**	-.091	.532**
	Sig. (2-tailed)	.021		.000	.323	.000
	N	120	120	120	120	120
Documentation	Pearson Correlation	.329**	.658**	1	-.129	.720**
	Sig. (2-tailed)	.000	.000		.159	.000
	N	120	120	120	120	120
Operating	Pearson Correlation	-.049	-.091	-.129	1	-.114
	Sig. (2-tailed)	.592	.323	.159		.215
	N	120	120	120	120	120
Individual	Pearson Correlation	.352**	.532**	.720**	-.114	1
	Sig. (2-tailed)	.000	.000	.000	.215	
	N	120	120	120	120	120
*. Correlation is significant at the 0.05 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						

Interpretation

The data showed a violation of normality, linearity or homoscedasticity. There was a negative correlation found between the factor, convenient operating hours and the rest selected factors, which was not statistically significant ($r = -0.114$, $n = 120$, $p = 1$). The Pearson correlation coefficient, r , is -0.114 and that is not statistically significant

4.4 ONE WAY ANOVA TEST

Hypothesis set between Experience of the respondents in logistics industry & their rating on the company's internal operation and efficiency of staff working there

Null Hypothesis

Ho = There is no statistically significant relationship between experience of the respondents in logistics industry & their rating on the company's internal operation and efficiency of staff working there.

Alternate Hypothesis

H₁ = There is a statistically significant relationship between experience of the respondents in logistics industry & their rating on the company's internal operation and efficiency of staff working there.

Descriptives								
Efficient Staff								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Less than 2 Years	59	2.5424	.77286	.10062	2.3410	2.7438	1.00	4.00
2-5 Years	34	2.6176	1.18103	.20254	2.2056	3.0297	1.00	5.00
5-10 Years	15	2.6000	.63246	.16330	2.2498	2.9502	1.00	3.00
10-15 Years	8	2.2500	.46291	.16366	1.8630	2.6370	2.00	3.00
More than 15 Years	4	2.2500	.95743	.47871	.7265	3.7735	1.00	3.00
Total	120	2.5417	.87827	.08017	2.3829	2.7004	1.00	5.00

ANOVA					
Efficientstaff					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.268	4	.317	.403	.806
Within Groups	90.523	115	.787		
Total	91.792	119			

Interpretation

This is the table that shows the output of the ANOVA analysis and we have no statistically significant difference between our group means. We can see that the significance level is 0.192 ($p = .192$), which is more than 0.05, therefore, there is no statistically significant relationship between experience of the respondents in logistics industry & their rating on the company's internal operation and efficiency of staff working there.

CHAPTER 5

FINDINGS, SUGGESTIONS AND CONCLUSION

5.1 FINDINGS

- ✓ 13% of the respondents are in the age group of 20-30 years, 6% of them are 31-40 years old, 62% of them are 41-50 years old, 11% of them are 51-60 years old and rest 8% respondents are more than 6 years old.
- ✓ 49% of the respondents are having less than 2 years of experience, 28% of the respondents are having 2-5 years of experience in logistics business, 13% of the respondents have 5-10 years of experience in logistics business, 7% of them have 10-15 years and rest 3% are having more than 15 years of experience in logistics business.
- ✓ 72% of the respondents are exporter-trader, 3% of them are exporter-Manufacturer, 18% of them are importer-trader, 3% of them are importer manufacturer and rest 3% respondents are other category respondents
- ✓ 29% of the respondents are getting international freight forwarding services, 16% of them are using cargo consolidation services, 16% of them are using cargo warehousing services, 21% of them are using the company as container handling agents, 6% of them are using the services of domestic freight forwarding, 7% of them are using the services of the company for customs clearance, 3% as forwarding agents and the rest 3% of them as air & sea cargo handling service
- ✓ 19% of the respondents involved in yearly shipments, 7% of the respondents do monthly shipments, 70% said fortnightly, 3% said weekly and 1% do daily shipments.

Satisfaction towards the efficiency of internal operations

- ✓ 11% of the respondents are highly satisfied with the answers to the customer queries, 30% of them are satisfied, 50% respondents are neutral towards this, 7% of them are dissatisfied and rest 3% of them are highly dissatisfied.
- ✓ 59% of the respondents are highly satisfied with staff's efficiency, 24% of them are satisfied, 6% respondents are neutral towards this, 8% of them are dissatisfied and rest 3% of them are highly dissatisfied.

- ✓ 14% of the respondents are highly satisfied with the company's update of new technology, 53% of them are satisfied, 24% respondents are neutral towards this, 6% of them are dissatisfied and rest 3% of them are highly dissatisfied.
- ✓ 12% of the respondents are highly satisfied with the aligned and arranged customer records, 33% of them are satisfied, 48% respondents are neutral towards this, 4% of them are dissatisfied and rest 3% of them are highly dissatisfied.
- ✓ 29% of the respondents are highly satisfied with the easy tracking of transshipped goods, 25% of them are satisfied, 27% respondents are neutral towards this, 17% of them are dissatisfied and rest 3% of them are highly dissatisfied.

Satisfaction towards the services provided

- ✓ 34% of the respondents are highly satisfied with the checking process done before booking of goods, 28% of them are satisfied, 48% respondents are neutral towards this, 4% of them are dissatisfied and rest 3% of them are highly dissatisfied.
- ✓ 12% of the respondents are highly satisfied with the lesser time taken for booking process, 38% of them are satisfied, 42% respondents are neutral towards this, 5% of them are dissatisfied and rest 3% of them are highly dissatisfied.
- ✓ 12% of the respondents are highly satisfied with the complete equipped warehouses, 33% of them are satisfied, 48% of them are neither satisfied nor dissatisfied, 6% of them are dissatisfied and rest 2% of them are highly dissatisfied.
- ✓ 57% of the respondents are highly satisfied with the quick shipping done, 29% of them are satisfied, 13% of them are neither satisfied nor dissatisfied, 1% of them are dissatisfied and rest 1% of them are highly dissatisfied.
- ✓ 10% of the respondents are highly satisfied with the high delivery speed, 30% of them are satisfied, 53% of them are neither satisfied nor dissatisfied, 4% of them are dissatisfied and rest 3% of them are highly dissatisfied.

Changes that are expected from the company

- ✓ 14% of the respondents strongly agree that on time product delivery is expected from the company, 40% of them agree with this, 38% of them are neither agree nor disagree this, 5% of them disagree and rest 3% of them are strongly disagree.
- ✓ 8% of the respondents strongly agree that resource fluency is expected from the company, 29% of them agree with this, 53% of them are neither agree nor disagree this, 6% of them disagree and rest 5% of them are strongly disagree.
- ✓ 9% of the respondents strongly agree that the organization ensure complete satisfaction on services, 33% of them agree with this, 53% of them are neither agree nor disagree this, 3% of them disagree and rest 3% of them are strongly disagree.
- ✓ 15% of the respondents strongly agree that giving individual attention to customers, 39% of them agree with this, 38% of them are neither agree nor disagree this, 6% of them disagree and rest 2% of them are strongly disagree.
- ✓ 9% of the respondents strongly agree that convenient operating hours are expected from the organization, 27% of them agree with this, 56% of them are neither agree nor disagree this, 5% of them disagree and rest 3% of them are strongly disagree.

Overall satisfaction towards booking and delivery process of Logistics companies

- ✓ 18% of the respondents said they are highly satisfied with the documentation work on shipment, 35% of them said they are satisfied, 39% said they are neither satisfied nor dissatisfied with this, 5% of them are dissatisfied and rest 3% of them are highly dissatisfied.
- ✓ 9% of the respondents said they are highly satisfied with the price card for the services, 28% of them said they are satisfied, 55% said they are neither satisfied nor dissatisfied with this, 5% of them are dissatisfied and rest 3% of them are highly dissatisfied.
- ✓ 14% of the respondents said they are highly satisfied with the safety of products during transmit, 33% of them said they are satisfied, 43% said they are neither satisfied nor dissatisfied with this, 6% of them are dissatisfied and rest 4% of them are highly dissatisfied.

- ✓ 8% of the respondents said they are highly satisfied with the insurance coverage for shipment, 33% of them said they are satisfied, 49% said they are neither satisfied nor dissatisfied with this, 7% of them are dissatisfied and rest 3% of them are highly dissatisfied.
- ✓ 14% of the respondents said they are highly satisfied with insurance coverage for shipment, 30% of them said they are satisfied, 48% said they are neither satisfied nor dissatisfied with this, 6% of them are dissatisfied and rest 3% of them are highly dissatisfied.

5.2 SUGGESTIONS

- ✚ In this paper, we aimed to analyze the logistics companies' satisfaction-loyalty consequence chain in the sphere of inter-company relationships and research the moderator effect of transportation services in the proposed relationship.
- ✚ The company should go for promotional activities so as to make people more aware about Logistics companies. It should send its executives and managers for regular visits in the corporate. This would improve the chances of the company in getting more contacts.
- ✚ Logistics companies should increase the workforce in the marketing department as the Chennai region is a very large area and the scope is immense. But if the company wants to penetrate the corporate sector in the Chennai region it will definitely have to increase its work force size.
- ✚ There was no specific strategy for marketing being implemented in the Logistics companies. The company should draft a particular strategy on marketing
- ✚ The company may concentrate on advertisement through Internet and Magazines. Advertisement should be made possible in majority of the media including local channels.
- ✚ From the conceptual point of view and after reviewing progress in the main lines of research into Logistics companies, we identified timeliness as the most significant dimension together with personnel, information and order quality.
- ✚ The literature review also allowed us to propose a relationship model which begins with Logistics companies and ends with loyalty through satisfaction.

- ✚ The results of the empirical research on a sample of 120 customers of Logistics companies mainly business to business model customers, show that Logistics companies associated to timeliness and personnel, information and order quality, has a clear, positive and significant influence on satisfaction and loyalty shown by customer companies.
- ✚ In addition, the results suggest that transportation system intensity in the supplier-customer relationship moderates the effect of the proposed links between the variables.
- ✚ Here, slightly stronger relationships make them effective in the first dimension of service quality and especially in the satisfaction-loyalty relationship.

5.3 CONCLUSION

The effectiveness and growth of the company finally lies on the market potential of the company. As an overall, the company's marketing strategy is in the booming stage. The company is suggested to follow the suggestion given by the researcher. Thus the company will be able to obtain considerable satisfaction in their marketing perspective.

Throughout the project I have analyzed the logistics industry. The growth of Logistics companies is quite dependent on the growth of infrastructure development. As Chennai is a developing city with huge number of infrastructures are coming up, the future growth of the Logistics companies is good here. Logistics companies have a good market share in Chennai market. It has a huge opportunity to enhance its current market share by tie-up with the local builders/promoters to take them in its confidence for using Logistics companies' services. The company should also modify their promotional activity to acquire the "Share of Mind" of the consumers.

In this context, Logistics companies in Chennai are in the initial stage of marketing functions, thereby creating a need to embrace the impact of its policies on their customers. Best marketing solutions would act as a stepping stone for the company to establish its market and to spread the activity to the entire country. Since this project involves more primary data collection, data relating to marketing practices and literature of authors were collected from the secondary sources like internet, books, etc. The company should adopt the modern concept of marketing strategy which emphasizes the market potential.

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APPENDIX- I
(QUESTIONNAIRE)

Name: _____

1. Age:

- a. 20-30 Years b. 31-40 Years c. 41-50 Years d. 51-60 Years e.
>60 Years

2. Years of Existence in the business

- a. Less than 2 Years b. 2-5 Years c. 5-10 Years d. 10-15 Years
e. More than 15 Years

3. Type of the company:

- a. Exporter-Trader b. Exporter-Manufacturer c. Importer-Trader d. Importer –
Manufacturer e. Others (please specify) _____

4. Which of the transportation service do you use?

- a. International Freight Forwarding b. Cargo Consolidation
c. Cargo Warehousing d. Container Handling Agents
e. Domestic Freight Forwarding f. Customs Clearance
g. Forwarding Agent h. Air & Sea Cargo Handling Service

5. In what frequency your shipments take place in logistics companies?

- a. Yearly b. Monthly c. Fortnightly d. Weekly e. Daily

Satisfaction towards the efficiency of internal operations of the company

*(Being, HS=Highly Satisfied; S=Satisfied; N=Neutral; DS=Dissatisfied and
HDS=Highly Dissatisfied)*

Q.No	Satisfaction towards the efficiency of Internal operations	HS	S	N	DS	HDS
6	Answers to the customer queries					
7	Staff's efficiency					
8	Company updated with new technology					
9	Aligned and arranged customer records					
10	Easy tracking of transshipped goods					

Satisfaction towards the services provided

(Being, HS=Highly Satisfied; S=Satisfied; N=Neutral; DS-Dissatisfied and HDS=Highly Dissatisfied)

Q.No	Satisfaction towards the services provide	HS	S	N	DS	HDS
11	Checking of goods are done prior to booking					
12	Booking process takes less time					
13	Warehouse is completely equipped					
14	Shipping is done quickly					
15	Delivery speed is high					

Changes that are expected from the company

(Being, SA=Strongly Agree; A=Agree; N=Neutral; DA-Disagree and SDA=Strongly Disagree)

Q.No	Service Gaps	SA	A	N	DA	SDA
16	On time product delivery					
17	Resource Facility					
18	Ensure complete satisfaction on services					
19	Should give individual customer attention					
20	Operating hours are to be convenient					

Kindly Rate the overall satisfaction towards booking and delivery process of Logistics companies

(Being, HS=Highly Satisfied; S=Satisfied; N=Neutral; DS-Dissatisfied and HDS=Highly Dissatisfied)

Q.No	Process	HS	S	N	DS	HDS
21	Documentation work on shipment					
22	Price card for the services					
23	Safety of products during transmit					
24	Insurance Coverage for shipment					
25	Delivery time of the product					

26. Any Suggestions for the improvement of transportation modes.

**APPENDIX-II
(ARTICLE)
A STUDY ON CHOICE OF TRANSPORTATION MODE IN LOGISTICS
INDUSTRY AT CHENNAI**

¹NANDHINI POOJA. R, ²Ms. KAVITHA RAJAYOGAN

¹Student , ¹Sathyabama Institute of Science and Technology, Chennai.

²Professor, ²Sathyabama Institute of Science and Technology, Chennai.

¹poojarajkumar28@gmail.com ²kavitha2984@gmail.com

Abstract: Today the task and responsibilities of business executives have become critically important due to technological advancement, increasing awareness of people, growing size and complexity of business. This project involves descriptive research for data collection. This study is based out of primary and secondary research; carried out that would help to gather fresh data which can be analyzed with the past data to seek the inferential analysis viz., Chi-square Test, ANOVA, Correlation. The results of these study shows positive results which is beneficial for the companies as the existing trends in logistics industry. This would include usage of questionnaire as a tool for gathering data. The respondents were selected randomly from the Chennai customer list provided by the companies. The research questions are set to be asked to the Clients of Logistics companies. Secondary data for the study has been compiled from the internet sources, magazines and newspapers which have been helpful in getting an insight of present scenario. The sample sizes of 120 respondents are interrogated and the results are analyzed using various respondents are satisfied and they are loyal to the companies

Keyword: primary research, secondary research, questionnaire for gathering data, internet sources, magazines, newspapers and inferential analysis.

1. INTRODUCTION

In this modern world of globalization everything is changing day-by-day, as innovation is the rule of nature. There is a tremendous change in consumer's buying

behavior also. Now everywhere consumers are more conscious about their purchasing. Now they are more aware and more educated. Per person income is also increasing and it is the reason now people are spending more.

Logistics play a vital role in such areas as productivity and growth in the “Industry 4.0” era, which is characterized by pure digital technology. Subsequently, advancements in the logistics industry will be most observed in commercial vehicles, transportation operations, and automated warehouses. In the new-generation trailer trucks, vehicles will be in constant communication with each other, customs offices, manufacturing plants, and roads.

Transportation plays a connective role among the several steps that result in the conversion of resources into useful goods in the name of the ultimate consumer. It is the planning of all these functions and sub-functions into a system of goods movement in order to minimize cost maximize service to the customers that constitutes the concept of business logistics. Production or manufacturing plants required the assembly of materials, components, and supplies, with or without storage, processing and material handling within the plant and plant inventory. Warehousing services between plants and marketing outlets involved separate transport.

Merchandising establishments completed the chain with delivery to the consumers. The manufacturers limited themselves to the production of goods, leaving marketing and distribution to other firms. Warehousing and storage can be considered in terms of services for the production process and for product distribution. There have been major changes in the number and location of facilities with the closure of many single-user warehouses and an expansion of consolidation facilities and distribution centers. These developments reflect factors such as better transport services and pressures to improve logistics performance.

Identified problem

This study speaks about the current status of customer choice towards the transportation services of Logistics companies. Challenges and requirements of planning for logistics companies are also discussed. Many of the logistics and supply chain companies are using latest transportation modes to maintain the effective process of transportation. The project speaks about the causes and effects of transportation system adopted in Logistics companies. Logistics companies are

facing troubles in maintaining their systems effectively due to various reasons. Technology is a boon to them.

Objectives

Primary Objective

To study the effectiveness of customer choices regarding the transportation modes and services offered by logistics companies

Secondary objectives

- ✓ To study the satisfaction level on the efficiency of internal operations of the logistics company
- ✓ To know the satisfaction level towards services provided by the company
- ✓ To understand the changes that are expected from the company
- ✓ To find the overall satisfaction level towards the booking and delivery process of logistics companies

2.REVIEW OF LITERATURE

V. Zeimpekis & G. M. Giaglis (2003), the issue of buyer-seller relationships in supply chain management research is becoming increasingly critical. Contemporary global markets, with their characteristics such as smaller and variable productions, rapid market changes and shorter lead times, represent a fundamental shift from a linear, sequential supply chain to an adaptive, agile supply chain network. In this context, the improvement of inventory management in warehouses and distribution centres appears to be a must, and wireless technology can be an effective solution to enhance business operation. This paper aims to improve current warehouse management practices by proposing an on-line, real-time hybrid wireless system that will facilitate the control of inventory operations and will be able to fulfill domestic and international customers' needs, more effectively.

TarunRadadiya (2015), logistics is traditionally driven by operational demands. Therefore innovations are mainly based on direct customer requests. However, logistics service providers (LSPs) have started to realize the importance of proactive innovation and advance technology to improve competitiveness. The development of new service concepts enables LSPs to increase customer Satisfaction and strengthen their competitiveness. Due to the fact that services cover specific

Characteristics, their development differs from traditional product development and requires adapted innovation and advance technology management processes. The production of services usually requires the participation of customers.

Peter Kolarovszki, Juraj Vaculík (2013), in his words described this article as RFID technology in conjunction with warehouse management systems. Article also deals with automatic identification and data capture technologies and each processes, which are used in warehouse management system. It describes processes from entering goods into production to identification of goods and also palletizing, storing, bin transferring and removing goods from warehouse. Article focuses on utilizing AMP middleware in WMS processes in Nowadays, the identification of goods in most warehouses is carried through barcodes. In this article we want to specify, how can be processes described above identified through RFID technology. All results are verified by measurement in our AIDC laboratory, which is located at the University of Žilina, and also in Laboratory of Automatic Identification Goods and Services located in GS1 Slovakia. The results of our research bring the new point of view and indicate the ways using of RFID technology in warehouse management system.

Kshitija Deshmukh, Ashitha Ann Santhosh, Yogesh Mane, Saurabh Verma, Sadhana Pai (2015), the improvements that can be made to present day warehouses by making it completely automated. Every single activity related to the warehouse would be performed without any human intervention. The warehouse management system consists of a 3 wheeled robot which navigates through the entire warehouse and transports the cartons from one point to another. The system also provides an efficient, fast and precise inventory management procedure. The dealers access the warehouse by means of an application created specifically for the warehouse.

3. RESEARCH METHODOLOGY

Research is carried out within most occupations. It is a way of accepted level-headedness when compared to a set of skills, examining significantly the various facets of your professional work. In the study, the various methods and measures are adopted by a researcher in analyzing the research problem in line with the logic guiding the research. It is essential to know not only the research

methods/techniques but the mode in which this will be carried out. They should be able to evaluate the research by developing tests. In order to satisfy the objectives, the descriptive research methodology is doled out. The main aim of descriptive procedure is to give a description of the as-is state of affairs. Hence it will be most suitable for the analysis taken for study. The main features of this methodology is that the researcher has no control over the elements, but can only report what has been happening or what was found during the study. The primary aim is to study the effect of transportation on the customers of Logistics companies. The data collected will be analysed and results will be ascertained. It is a way of accepted level-headedness when compared to a set of skills, examining significantly the various facets of your professional work. In order to satisfy the objectives, the descriptive research methodology is doled out. The main aim of descriptive procedure is to give a description of the as-is state of affairs. The main features of this methodology is that the researcher has no control over the elements, but can only report what has been happening or what was found during the study. The chi-square test is applied to nominal data. Using this test we can compare the data collected with the expected data and draw the Interpretation from it.

Descriptive research includes surveys and fact-finding enquires of different kinds. The major purpose of descriptive research is description of the state of affairs as it exists at present. The main characteristic of this method is that the researcher has no control over the variables; he can only report what has happened or what is happening. This project involves descriptive research for data collection.

Research Design

Research Design is the conceptual structure within which research is conducted. It constitutes the blueprint for collection, measurement, & analysis of the data. The design used for carrying out this research is exploratory & experience based.

I intend to carry out primary and secondary research, carry out focus interviews and group discussions which would help me to gather fresh data which can be analyzed with the past data to seek the existing trends in logistics industry. This would include usage of questionnaire as a tool for gathering data

4. DATA ANALYSIS & INTERPRETATION

4.1 DEMOGRAPHIC PROFILE

		Frequency				
		Yearly	Monthly	Fortnightly	Weekly	Daily
		Count	Count	Count	Count	Count
Age	20-30 Years	6	1	8	1	0
	31-40 Years	1	0	6	0	0
	41-50 Years	13	7	51	3	0
	51-60 Years	1	0	11	0	1
	More than 60 Years	2	0	8	0	0
Experience	Less than 2 Years	11	4	43	1	0
	2-5 Years	7	3	23	1	0
	5-10 Years	0	0	12	2	1
	10-15 Years	3	1	4	0	0
	More than 15 Years	2	0	2	0	0
Type	Exporter-Trader	17	5	60	4	0
	Exporter- Manufacturer	0	0	3	0	1
	Importer-Trader	6	3	13	0	0
	Importer – Manufacturer	0	0	4	0	0
	Others	0	0	4	0	0

Service	International Freight Forwarding	3	4	28	0	0
	Cargo Consolidation	5	2	11	0	1
	Cargo Warehousing	5	1	10	3	0
	Container Handling Agents	5	0	20	0	0
	Domestic Freight Forwarding	4	0	2	1	0
	Customs Clearance	0	1	7	0	0
	Forwarding Agent	0	0	4	0	0
	Air & Sea Cargo Handling Service	1	0	2	0	0

4.2 Chi-Square Test

Relationship between age of respondents and their expectation from logistics organization on showing individual attention to customers.

Table 4.2 Chi-Square Test

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.931 ^a	16	.604
Likelihood Ratio	17.597	16	.348
Linear-by-Linear Association	.061	1	.805
N of Valid Cases	120		
a. 19 cells (76.0%) have expected count less than 5. The minimum expected count is .12.			

Calculated value = 0.604

Calculated value > Table value

Inference:

Hence, there is no relationship between age of respondents and their expectation from logistics organization on showing individual attention to customers.

4.3 Correlation

A Pearson product-moment correlation was run to determine the relationship between the selected variables

Table 4.3 Correlation

		Correlations				
		Updated	Warehous e	Documentati on	Operating	Individual
Updated	Pearson Correlation	1	.210 [*]	.329 ^{**}	-.049	.352 ^{**}
	Sig. (2-tailed)		.021	.000	.592	.000
	N	120	120	120	120	120
Warehouse	Pearson Correlation	.210 [*]	1	.658 ^{**}	-.091	.532 ^{**}
	Sig. (2-tailed)	.021		.000	.323	.000
	N	120	120	120	120	120
Documentation	Pearson Correlation	.329 ^{**}	.658 ^{**}	1	-.129	.720 ^{**}
	Sig. (2-tailed)	.000	.000		.159	.000
	N	120	120	120	120	120
Operating	Pearson Correlation	-.049	-.091	-.129	1	-.114
	Sig. (2-tailed)	.592	.323	.159		.215
	N	120	120	120	120	120
Individual	Pearson Correlation	.352 ^{**}	.532 ^{**}	.720 ^{**}	-.114	1
	Sig. (2-tailed)	.000	.000	.000	.215	
	N	120	120	120	120	120
*. Correlation is significant at the 0.05 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						

Interpretation

The data showed a violation of normality, linearity or homoscedasticity. There was a negative correlation found between the factor, convenient operating hours and the rest selected factors, which was not statistically significant ($r = -0.114$, $n = 120$, $p = 1$). The Pearson correlation coefficient, r , is -0.114 and that is not statistically significant

4.4 Anova Test

Hypothesis set between Experience of the respondents in logistics industry & their rating on the company's internal operation and efficiency of staff working there

Table 4.4 Anova Test

ANOVA					
Efficientstaff					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.268	4	.317	.403	.806
Within Groups	90.523	115	.787		
Total	91.792	119			

Inference: This is the table that shows the output of the ANOVA analysis and we have no statistically significant difference between our group means. We can see that the significance level is 0.192 ($p = .192$), which is more than 0.05, therefore, there is no statistically significant relationship between experience of the respondents in logistics industry & their rating on the company's internal operation and efficiency of staff working there.

5. CONCLUSION

The effectiveness and growth of the company finally lies on the market potential of the company. As an overall, the company's marketing strategy is in the booming stage. The company is suggested to follow the suggestion given by the researcher. Thus the company will be able to obtain considerable satisfaction in their marketing perspective.

Throughout the project I have analyzed the logistics industry. The growth of Logistics companies is quite dependent on the growth of infrastructure development. As Chennai is a developing city with huge number of infrastructures are coming up, the future growth of the Logistics companies is good here. Logistics companies have a

good market share in Chennai market. It has a huge opportunity to enhance its current market share by tie-up with the local builders/promoters to take them in its confidence for using Logistics companies' services. The company should also modify their promotional activity to acquire the "Share of Mind" of the consumers.

In this context, Logistics companies in Chennai are in the initial stage of marketing functions, thereby creating a need to embrace the impact of its policies on their customers. Best marketing solutions would act as a stepping stone for the company to establish its market and to spread the activity to the entire country. Since this project involves more primary data collection, data relating to marketing practices and literature of authors were collected from the secondary sources like internet, books, etc. The company should adopt the modern concept of marketing strategy which emphasizes the market potential.

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