

**A STUDY ON SUPPLY CHAIN MANAGEMENT IN TILES INDUSTRIES WITH SPECIAL
REFERENCE TO ROCOTILE COOL TILES MANUFACTURER INDUSTRY**

Submitted in partial fulfilment of the requirement for the award of

Master of Business Administration

BY

Y.IBRAHIM BADUSHA

(41410125)



**DEPARTMENT OF BUSINESS ADMINISTRATION
SCHOOL OF MANAGEMENT STUDIES**

SATHYABAMA

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

Accredited with Grade “A” by NAAC

JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600 119

MAY- 2023



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www.sathyabama.ac.in

DEPARTMENT OF BUSINESS ADMINISTRATION

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **Y. IBRAHIM BADUSHA (41410125)** who carried out the project entitled “**A STUDY ON SUPPLY CHAIN MANAGEMENT IN TILES INDUSTRIES WITH SPECIAL REFERENCE TO ROCOTILE COOL TILES MANUFACTURER INDUSTRY**” under our supervision for a period of 3 months from January 2023 to March 2023.

Dr. M. Sudha Paulin., M.B.A.,Ph.D.

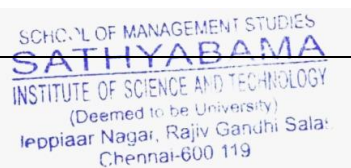
(Internal Guide)

Mr. Ravi Kumar

(External Guide)

Dr. BHUVANESWARI .G

Dean – School of Management Studies



Submitted for Viva voce Examination held on 05/05/2023

Internal Examiner

External Examiner

DECLARATION

Y.IBRAHIM BADUSHA hereby declare that the Project Report entitled “**A STUDY ON SUPPLY CHAIN MANAGEMENT IN TILES INDUSTRIES WITH SPECIAL REFERENCE TO ROCOTILE COOL TILES MANUFACTURER INDUSTRY** Sholinganallur Chennai. Done by me under the guidance of **Dr. M. Sudha Paulin., M.B.A.,Ph.D.** Internal and External **Mr.Ravi Kumar** at Homegenie Building Products Private Limited CHENNAI is submitted in partial fulfilment of the requirements of the award of Master of Business Administration.

DATE:05/05/2023

PLACE: CHENNAI



IBRAHIM BADUSHA Y

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IBRAHIM BADUSHA

ABSTRACT

Supply chain management is a critical aspect of conducting any business. In this article, we provide an overview of the advancements in supply chain management. In the initial section, we present alternative definitions and key issues related to supply chain management followed by a discussion of complexities associated with managing supply chains. Subsequently, we discuss major inefficiencies of poor supply chain management. Finally, a brief summary of research activity to date and a discussion of future challenges related to supply chain management are presented. This paper seeks to introduce supply Chain and Supply Chain Management. A Supply Chain and Supply Chain Management definition, theoretical, practical and measurement analysis are proposed. Several randomly selected refereed academic articles were methodically analyzed. A number of key findings have arisen: the field is a comparatively new one; several researchers have different perception of the discipline; the consensus is lacking on the definition of the terms: the Supply Chain and Supply Chain Management are widely defined; contextual focus is mainly on the manufacturing industry; research methods employed are mostly theoretical conceptual; the findings also suggest that undertaking a theory view could make important contributions towards defining the scope of supply chains..

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CHAPTER -1 – INTRODUCTION

1.1. INTRODUCTION :

Supply chain management, just-in-time production (JIT), quick response manufacturing, vendor management, and other terms such as agile manufacturing all share the goal of improving vendor response to customer demand. All of these philosophies or concepts share the same core values. They are forms including wasted time. Supply chain management embraces the other philosophies and extends their scope from one firm to all the firms in a supply chain. There are two forces driving supply chain management. First, is that there is the new communications technology available now that allows managers to actively manage a supply chain. Second, customers are demanding lower prices and better products and services. To meet their customers' demands, firms are optimizing the entire supply chain. Supply chain management allows all the firms in a supply chain to look beyond their own objectives to the objective of maximizing the final customer's satisfaction. Failure to correctly manage the issues of trust and communication will abort any attempt to manage the Supply chain. When there is a lack of trust and attempt to improve customer service by eliminating waste Failure to correctly manage the issues of trust and communication will abort any attempt to manage the supply chain. When there is a lack of trust and from the system in all of its communication, the supply chain's members will soon succumb to greed or suspicion that other member of the supply chain are profiting at their expense. When the communication is not adequate, the supply chain will not improve its response enough to increase profits for its members. Without an increase in profits, the efforts to manage the supply chain will be reduced, because there will be no reward for actively managing it. Supply chain management requires an unprecedented level of cooperation between the members of the supply chain. It requires an open sharing of information so that all members know they are receiving their full share of the profits. Here the better display of products available at warehouse is also a type of communication. Since many of the firms in a supply chain do not have a history of cooperation, achieving the trust necessary for supply chain management is a time-intensive task. Another way that the firms in the supply chain can save money is by ensuring that their marketing strategies correspond to the supply scenario.

1.2. NEED OF STUDY

Supply chain management is regional, national and global – it is everywhere. Without it, the wheels of industry and the economy would grind to a halt. Many aspects of our day-to-day lives depend on the ability to manage supply chains successfully within a global economy.

1.3. SCOPE OF STUDY

Infrastructure industries are fast growing in India since 1996. Tiles are produced in few locations across India. The destinations are wherever a construction is taking place whether it is domestic or institutional. The reach of the demanding location has been wider and deeper. The present supply chain management is done with the help of available modes of transports. However, the preference of the mode by the players is different. Therefore, this study aims at understanding the distribution system in the context of availability of tiles and its need. The scope of this present study is wider and deeper. The findings of this research would help in implementing a refined style of distribution system. That would ensure the speedy delivery, cost effectiveness and good warehousing system and the competitive transport system

1.4.COMPANY PROFILE :

Rocotile is a result of an innovative and unique technology that combines the goodness of nature with the exactness of science in cooling tiles manufacturing to keep your home super cool and supremely comfortable. Rocotile uses 13 natural cooling minerals and deploys cutting-edge technology to manufacture white cooling tiles that are of export quality. It's modern and state-of-the-art manufacturing plant in Chennai is one-of-its kind and has sufficient capacity to cater to the entire city of Chennai!

Heat islands are city areas where the temperature is several degrees higher. As a result of heat island effect, significant heat absorption takes place during the day and very little cooling occurs during the night. A reduction of this heating effect will make much more pleasant and residents can sleep better. An American study concluded that ordinary clay tiles reflect only 35% of the heat and is 20°C warmer, while a white roof reflects around 85% of the heat and is just 5°C warmer than the ambient temperature.

Reason why, we have developed special white roof cooling tiles to make your home cool and comfortable.

1.5. INDUSTRY PROFILE :

Homegenie Building Products Private Limited is a Chennai, Tamil Nadu (India) located tiles manufacturing company, having specialization in bringing forth heat and cold insulation tiles. The variety of tiles we manufacture and supply are Heat Reflective Tiles, Weathering Cool Roof Tiles, Weathering Roof Tiles, Weathering Cool Tile, Thermal Insulation Tiles and many others. These are designed and developed using German Technology. Making these tiles structurally and attractively perfect is a team of our designers, which keeps in knowledge old as well as new technologies and techniques. Having a wide, large and well-fitted production unit makes us proud as it is these altogether that helps in finishing bulk orders on promised time.

ADDRESS: S.No.52, Service Road, Bypass, road, Kanthamapuram, Vanagaram, Chennai, Tamil Nadu
600095

1.6. PRODUCT PROFILE :



1.7. Facts Table of Homegenie Building Products Private Limited :

Nature of Business	Manufacturer, Wholesaler/Distributor, Supplier & Trader
Year of Establishment	2016
Working As An Original Equipment Manufacturer	Yes
No. of Production Units	01
Production Type	Automatic
Warehousing Facility	Yes
No. of Designers	05
No. of Engineers	10
No. of Employees	60
Monthly Production Capacity	1 Crore Tiles
Company Branches	06
Annual Turnover	Rs. 12 Crore
Banker	Lakshmi Vilas Bank
Membership Number for Indian Green Building Council	IGBCMM180167

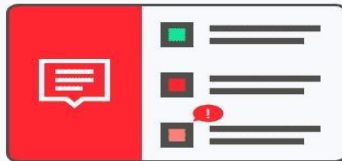
Supply Chain Management Building Blocks

The building blocks of Supply Chain Management are Strategic Planning, Demand Planning, Supply Planning, Procurement, Manufacturing, Warehousing, Order Fulfillment and Transportation business processes.

Blocks:

Step 1: Strategic Planning

Strategic Planning Process involves the strategic supply chain design and strategic sourcing.

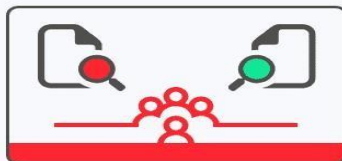


Step 2: Demand Planning

Demand Planning process involves Forecasting, Lifecycle Planning, Promotion Planning and Consensus Demand Planning.

Step 3: Supply Planning

Supply Planning process involves Safety Stock Planning, Supply Network Planning, Outsourcing, Distribution Planning, Customer Collaboration and Supplier Collaboration.



Step 4: Procurement

Procurement process involves Purchase Order Processing, Receipt Confirmation and Invoice Verification.

Step 5: Manufacturing

Manufacturing Process involves Production Planning / Detailed Scheduling, Manufacturing Execution.



Step 6: Warehousing

Warehousing Process involves Inbound Processing, Outbound Processing, Cross Docking, Warehousing, Storage and Physical Inventory.

Step 7: Order Fulfillment

Order Fulfillment Process involves the sales order processing and billing business process.



Step 8: Transportation

Transportation Process involves the transportation planning, transportation execution and freight costing processes.

1.8. Strategic Planning Process :

Strategic Planning Process involves the strategic supply chain design and strategic sourcing. Strategic Supply Chain Design is the design, evaluation, and optimization of the supply chain model used in the planning applications. Every part of the supply chain such as locations, transportation lanes, resources and products are modeled to execute planning based on this network. This helps to respond immediately and accurately to the new developments by tracking alert situations in the supply network.

1.9. Demand Planning :

Demand Planning process involves Forecasting, Lifecycle Planning, Promotion Planning and Consensus Demand Planning. Forecasting predicts future demand based on historical and judgmental data. Forecasts can be created using different methods such as statistical methods, causal analysis, human judgment or combination of all the above. Forecast accuracy can be improved using statistics and the overall performance management can be analyzed through forecast accuracy analytics.

1.10. Supply Planning :

Supply Planning process involves Safety Stock Planning, Supply Network Planning, Outsourcing, Distribution Planning, Customer Collaboration and Supplier Collaboration. Safety Stock Planning Process arrives at the appropriate level of safety stock inventory for all intermediate and finished products at their respective locations to meet a target service level. Supply Network Planning process calculates quantities to be delivered to the locations to match customer demand and maintain desired service level. Outsourcing process enables outsourcing of manufacturing facilities to a third party, known as the subcontractor. Distribution Planning process determines the best short term strategy to allocate available supply to meet demand and to replenish stocking locations.

1.11. Procurement Process :

Procurement process involves Purchase Order Processing, Receipt Confirmation and Invoice Verification. Purchase Order Processing fulfills the direct procurement requirements through the sourcing, issuance, and confirmation of purchase orders. Receipt Confirmation processing informs other departments about the received and confirmed quantity of ordered goods. Invoice Verification process receives, enters and checks vendor's invoice for correctness.

1.12. Manufacturing Process :

Manufacturing Process involves Production Planning / Detailed Scheduling, Manufacturing Execution. Production Planning / Detailed Scheduling process supports the process of assigning production orders to resources in a specific sequence and time frame. Manufacturing Execution process supports the process of capturing actual production information from the shop floor to support

production control and costing processes.

1.13. Warehousing Process :

Warehousing Process involves Inbound Processing, Outbound Processing, Cross Docking, Warehousing, Storage and Physical Inventory. Inbound Processing comprises all the steps of an external procurement process that occur when the goods are received warehousing & Storage Processes warehouse internal movements and storage of materials. Physical Inventory: Physical Inventory supports all activities for planning and executing the physical inventory

1.14. Order Fulfillment Process :

Order Fulfillment Process involves the sales order processing and billing business process.

1.15. Sales Order Processing :

Sales Order processing allows the order entry, pricing, and scheduling order for fulfillment. Billing process considers all activities from issuing the invoice to the incoming payment.

1.16. Transportation Process :

Transportation Process involves the transportation planning, transportation execution and freight costing processes. Transportation Planning process creates an optimized, executable transportation plan for the enterprise. Transportation Execution process covers the complete and integrated solution process to create, execute, and monitor shipments

CHAPTER - 2

2.1 REVIEW OF LITERATURE :

Ganeshan, R, and Harrison Terry P., (2013) has defined Supply Chain Management (SCM) as a chain of facilities and distribution alternatives that performs the functions of obtainment of products, transformation of these products into intermediate and finished goods, and the distribution of these finished goods to customers. declare that Supply Chain Management (SCM) incorporates the integration of activities taking place among facilities network that acquire raw material, transform them into intermediate products and then final goods, and deliver goods to customers through a system of distribution. According to Christopher M. Supply chain refers to the organizations network that are involved in the diverse processes and activities that generate value in the form of goods and services in the hands of the end customer. Supply Chain Management (SCM) is the “strategic and efficient coordination of the conventional business functions and the strategies across these business functions within a specific corporate and across businesses within a supply chain, for the aims of developing the long-term performance of the corporate and the supply chain as an entire.

According to Grant, D., Lambert, D., Stock, J. and Ellram, L. (2014), Supply Chain management refers to corporate business processes integration from end users through suppliers that provides information ,goods, and services that add value for customers. The Supply Chain management (SCM) is defined by the Supply Chain Forum (SCF) as the integration of key business processes from end user through suppliers that provide goods, services and information that add value for customers.

Jacobs Wouter and Peter V. Hall (2015) mentioned that the recent academic debates about port competition have centered on the strategic responses of port authorities, operators, managers and owners to the emergence of global supply chains. The competitive performance of a port authority or operator, given the rise of the integrated logistics sector, depends increasingly on its strategic relationship to these supply chains and rather less on traditional port competition factors such as hinterland size and physical infrastructure.

Gunasekaran and McGaughey (2016) extended the scope of SCM beyond material management, partnership, information technology to the Total Quality Management areas like management commitment, organizational structure, training and behavioural issues. As firms' survival lies on integration, a

good understanding of the integration process is a key aspect in SCM. Mouritsen discussed that basic hypothesis “the more integration wider the scope – the better the management of the chain” is not always true and proved that it depends very much on the “environment” of the supply chain and the power relations between the participants in the supply chain. Authors proposed a set of management techniques and tools to analyze successful SCM strategies.

Michael J. Malone & W.C. Benton (2017) suggested that the expanding importance of supply chain integration presents a challenge to operations researchers to focus more attention on supply chain modeling and there are numerous opportunities for operations researchers to provide support for the current conceptual based supply chain research.

J.Masonetal. (2018). More developed SCM is indicated by systematic integration, i.e. standardized and automatic inter-organizational interfaces. In order to improve effectiveness of SCM, a synchronized operation of all partners in the supply chain is required. In the past, this has been achieved by one company owning or having control over all businesses in chain.

Arifianti (2019) stated that supply managers must decide on the frequency of placing an order and the number of items in that order. These supply managers handle the logistics starting from the purchasing, storing raw materials, processing of products and creating the final products. Supply of raw materials is a determinant in order fulfilment of market demands. Stagnation occurs when the source of this raw material is uncontrolled by the company. This scenario might cause the non-fulfilment of demand orders from the market and customers

Pavico (2020) indicated a significant correlation between price and promotion of marketing and SCM practices; this observation is relevant because micro enterprises strive to integrate their functions towards attaining a competitive advantage in terms of cost; however, warehousing and physical distribution of logistics and price in marketing are considered significantly correlated with competitive advantage in terms of differentiation.

Koh et al (2007) states that SCM’s practices involve a set of activities undertaken by organization to promote effective management of their supply chain. Tutuncu and Kucukusta (2008) go beyond that and states that SCM lead to changes in the structure of the organization by integrating internal

functions and linking these with the external operation of suppliers, customers and others stakeholders of the supply chain.

Poirier C.C. (2002), advocates the four levels of supply chain optimization. The level one, 'Sourcing and Logistics' and level two, 'Internal Excellence' come under "Internal control". The level, three, 'Network Construction' and level four, 'Industry Leadership' come under "External control". Every Organization can assess their status level and strive to the next level.

Forrester J.W.(1999) indicates systems approach to Supply chain members and their supply chain management. Each member is an Entity with system elements of Input, Processes, output, control, feedback and boundary conditions. It explains the ramifications created by internal and boundary conditions. It also deals with outside or environmental pressures on the system elements

Yinan Qi, Boyer KK and Zhao X (2009) declare that Supply chain management is the most popular approach as the Firms must have clear strategic thinking in order to effectively organize such complicated activities, resources, communications and processes. This is essential to enhance the global competitiveness of business corporations today. The authors explain a framework that identifies three kinds of supply chain strategies: lean strategy, agile strategy and lean/agile strategy on in-depth case studies. Extant research also suggests that supply chain strategies must be matched with product characteristics in order for firms to achieve better performance

Hartmut Stadler (2005) aims at extracting the essence of Supply chain management and advanced planning in the form of two conceptual frameworks: the house of SCM and the supply chain planning matrix. The contributions to this feature issue are assigned to the building blocks of the house of SCM or to the modules covering the supply chain planning matrix. The author focuses on the software for advanced planning and outline the main shortcomings and present latest research results for their resolution. The advanced planning is not an isolated building block of SCM; instead it should be used for decision support within other building blocks; e.g. the choice of partners in different geographical regions can be evaluated by strategic network planning.

Gregor Dudek and Hartmut Stadler (2005) proposes a non-hierarchical, negotiation-based scheme which can be used to synchronize the plans between two independent supply chain partners linked by material flows. The author attempts to link and coordinate planning between isolated parts of S through Supply Chain planning matrix. He advocates Collaborative planning between adjacent Planning domains.

Mehra (2005) discusses various views and contributions of various authors writing on the critical issues of managing supply chains, specifically, topics, such as relationship, quality, performance, integration, responsiveness, risk management strategies, agility and incentive systems in the supply chains are addressed.

CHAPTER – 3 : RESEARCH METHODOLOGY

3.1. OBJECTIVE

Primary objective :

A study on supply chain management in tiles industries with special reference to rocotile cool tiles manufacturer industry

Secondary Objective :

- To make an account of present distribution system of tiles and the flooring materials
- To evaluate the present system of transportation in the context of distribution system
- To lay down the premises of the present distribution system with respect to various dimensions like quickness, warehousing and supply chain management
- To differentiate the companies hiring transportation from the companies doing own transportation in the context of quickness, warehousing, cost-effectiveness and SCM; and to suggest, if possible, a suitable solution to overcome the present hindrances in the supply chain management.

3.2. SAMPLE DESIGN :

The distribution system of supply chain management of tiles is more complex and cumbersome. The system depends on a rigid model where each point in the model does not have more choice or alternative arrangements.

3.3. SOURCE OF DATA COLLECTION :

The method of data collection adopted for the study is both primary and secondary. The primary data were collected with a structured questionnaire. The questionnaire was structured and restructured several times, since each dealer opined that some questions were not answerable. The pilot design was amended several times. The final shape of the questionnaire was tested few times with respondents and determined. The questionnaire was mainly administered to the distributors or dealers of tiles of south part of Tamil Nadu directly. Therefore, interview style has been used. Interview with the questionnaire also facilitated to initiate investigation, which, the researcher believed to substantiate the findings at the end.

The secondary data related to tiles industries in Tamil Nadu have been collected from various sources like Journals, undated Journals, Books and other booklets. Some of the international journals on supply chain managed have been referred to in this regard. Since this segment has been unexplored over years, there was only little information available in this regard. Some of the journals referred to have been noted in the bibliography.

3.4. Period Of Study

The period of time taken to conduct the survey and prepare the research paper is 3 months. (January 2023 to March 2023).

3.5 Methodnof data collection

Following data collection methods are most commonly used in order to conduct research

3.5.1 Experiments

Experiment refers to the method in which certain tasks are performed under controlled environment in order to get some results. The results might be expected or unexpected. Experiments focus on cause-and-effect mechanism. Based on the results of the experiments performed, analyses are made.

3.5.2 Observational Study

Such a study involves making opinions based on observations from natural resources and previous researches. This is not very accurate data collection method.

3.5.3 Questionnaires

Surveys or questionnaires are the methods that collect data from a sample of population whereas sample refers to the subjects under study that are. The answers given by the sample population are evaluated and analyzed. It is a very effective process since it gives clear decision-making ability. Besides, it is a cost-effective data collection method.

3.5.4 Structure of Questionnaire:

Questionnaire was divided into three sections. First part consists of psychometric test questions and the second part consist of Questionnaire technique questions and the third part consist of critical incident technique questions. All these sections are followed by personal details of an employees.

3.6 Analysis of Data

In order to extract useful results for reaching a strong conclusion and decision making, it is important to analyze the data. The procedure of transforming all the obtained data into useful data and then obtaining a clear conclusion about the data is the process of analysis. Analysis process also includes examining the data, building relation of different data types with each other and trends of different factors. Questionnaire was divided into three sections. First part consists of psychometric test questions and the second part consist of Questionnaire technique questions and the third part

consist of critical incident technique questions. All these sections are followed by personal details of an employees.

3.6.1 Tools for Analysis

SPSS is short for Statistical Package for the Social Sciences, and it's used by various kinds of researchers for complex statistical data analysis. The SPSS software package was created for the management and statistical analysis of social science data. It was originally launched in 1968 by SPSS Inc., and was later acquired by IBM in 2009. SPSS is used by market researchers, health researchers, survey companies, government entities, education researchers, marketing organizations, data miners, and many more for processing and analyzing survey data, such as you collect with an online survey platform like Alchemer. Most top research agencies use SPSS to analyze survey data and mine text data so that they can get the most out of their research and survey projects.

3.6.2 Statistical techniques to be Used

The analysis of the data helps the researcher to reach conclusion and findings of the study. Appropriate statistical techniques will be used in the study to analyze data.

However, the researcher proposes following statistical techniques for data analysis.

- Chi square
- F-Test (One Way Anova)
- Correlation

For this research study, above mentioned statistical techniques will be used to identify competencies and measure its impact on organization effectiveness.

CHAPTER 4

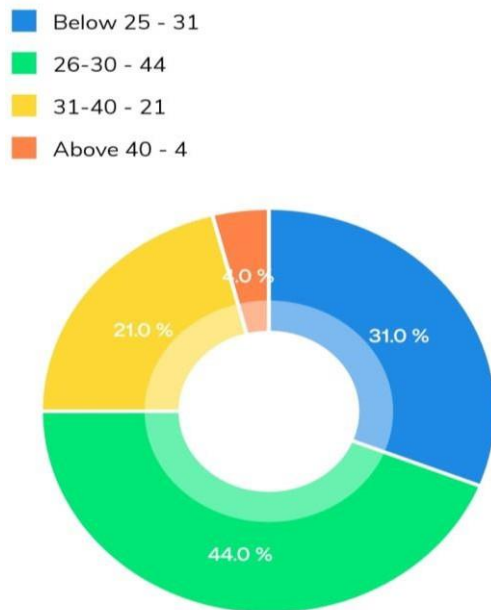
DATA ANALYSIS AND INTERPRETATION

4.1 PERCENTAGE ANALYSIS

Table 4.1.1 **Table Showing age wise classification of respondents**

S no	Particulars	No of respondents	Percentage
1	Below 25	31	31.00
2	26-30	44	44.00
3	31-40	21	21.00
4	40 and above	4	4.00
	TOTAL	100	100%

Chart 4.1.1: Age of respondents



Interpretation

From the above table it is interpreted that the number of respondents between below 25 age of respondents are 31.0%, between 26-30 age of respondents are 44.0% between 31-40 age of respondents 21.0%. above 40 age of respondents are 4.0%.

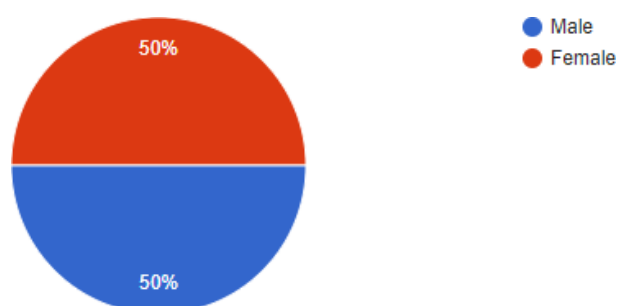
Inference

Majority (44.0%) of the respondents are age between 26-30 years.

Table 4.1.2 **Table showing gender wise classification**

S no	Particulars	No of respondents	Percentage
1	Male	50	50.00
2	Female	50	50.00
	Total	100	100%

Chart 4.1.2: Gender of the respondents



Interpretation

From the above table it is interpreted that the number of female respondents is 50.0% and male respondents is 50.0%.

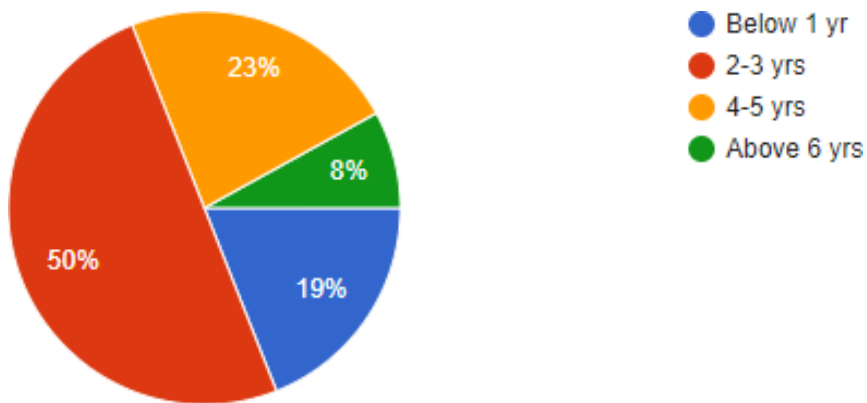
Inference

Both (50.0%) of the respondents are Male and Female.

Table 4.1.3 **Table showing years of experience of respondents**

S no	Particulars (Years)	No of respondents	Percentage
1	Below 1	19	19.00%
2	2-3	50	50.00%
3	4-5	23	23.00%
4	6 and above	8	8.00%
	TOTAL	208	100%

Chart 4.1.3: Years of experience



Interpretation

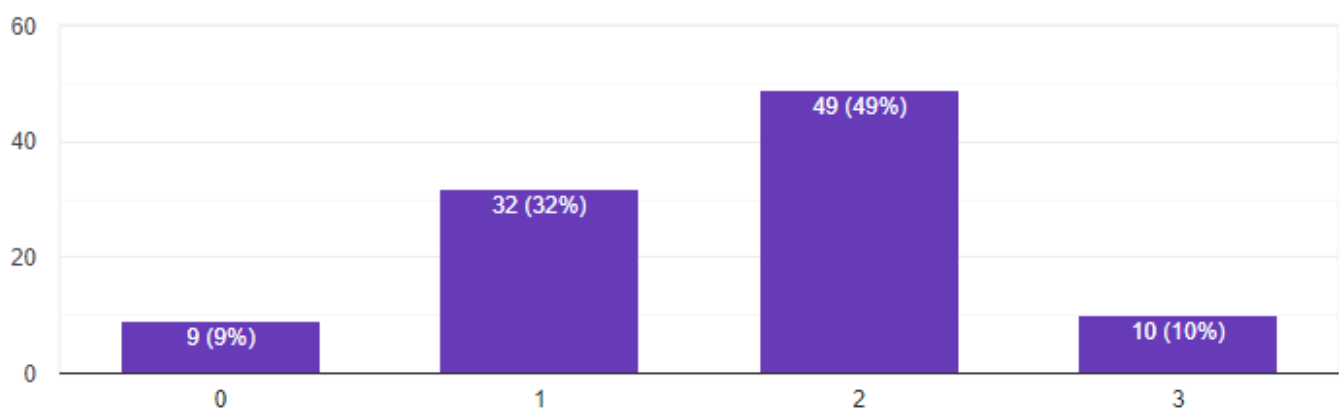
From the above table it is interpreted that the number of experience below 1 year is 19.00%, 2-3 years is 50.00%, 4-5 years is 23.00% and 6 and above years is 8.00%.

Inference

Majority (50.0%) of the respondents are 2-3 years experience.

Table 4.1.4 **Table showing working strategies of supply chain management department on the basis of current programs**

S No	Particulars	NO OF RESPONDENTS	PERCENTAGE
1	0	9	9%
2	1	32	32%
3	2	49	49%
4	3	10	10%
	TOTAL	100	100%



Interpretation

From the above table it is interpreted that the number of ratings 0 is 9.00%, 1 is 32.00%, 2 is 49.00% and 3 is 10.00%.

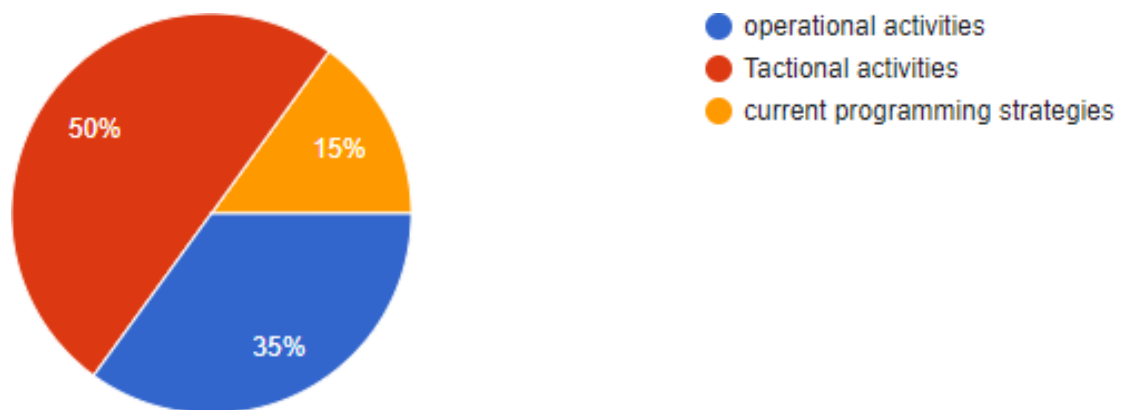
Inference

Majority (49.0%) of the respondents are given 2 rating.

Table 4.1.5 **Table showing current growth process of the organization**

S No	Particulars	NO OF RESPONDENTS	PERCENTAGE
1	Operational activities	9	9%
2	Tactical activities	32	32%
3	Current programming strategies	49	49%
	TOTAL	100	100%

Chart 4.1.5



Interpretation

From the above table it is interpreted that the number of needs of production operational activities is 35.00%, tactical activities is 50.00%, current programming strategies is 15.00%.

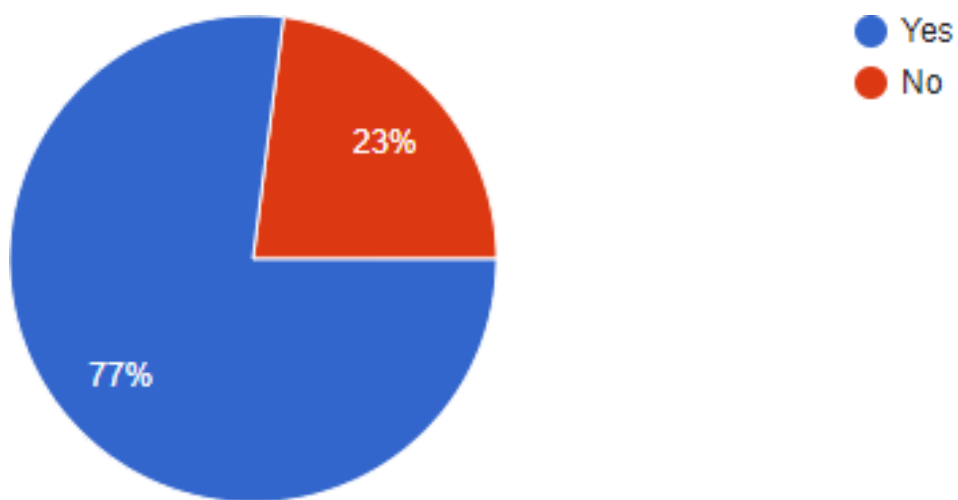
Inference

Majority (50.0%) of the respondents are tactical activities

Table 4.1.6

**Table showing is Supply Chain Management having
all the address of the developer branches of the company**

S No	Particulars	NO OF RESPONDENTS	PERCENTAGE
1	Yes	77	77.00%
2	No	23	23.00%
	TOTAL	100	100%

Chart 4.1.6

Interpretation

From the above table it is interpreted that the number of SCM having all the address of developer branches of the company yes is 77.00%, no is 23.00%.

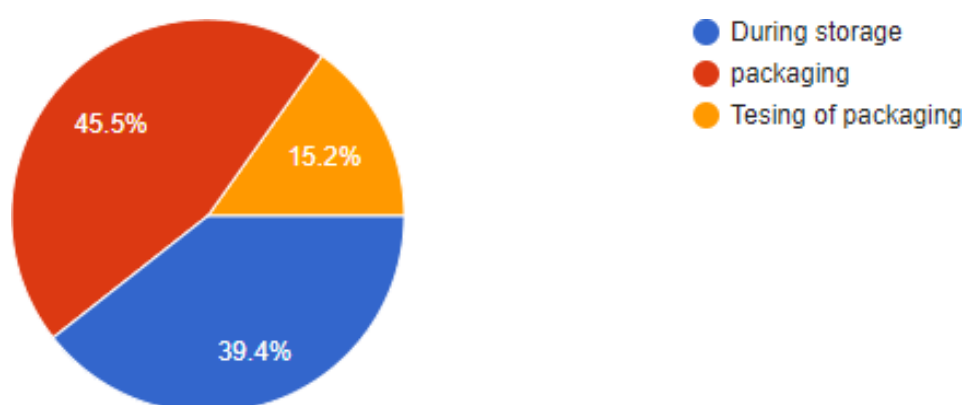
Inference

Majority (77.0%) of the respondents are yes

Table 4.1.7 **Table showing Choose the right option where the supply chain department is facing problem in taking care the raw material**

S No	Particulars	NO OF RESPONDENTS	PERCENTAGE
1	During Storage	39	39.4%
2	Packaging	46	45.5%
3	Testing of packaging	15	15.2%
	TOTAL	100	100%

Chart 4.1.7



Interpretation

From the above table it is interpreted that the number of facing problems in During Storage is 39.4.00%, Packaging is 45.5%, Testing of packaging is 15.2%.

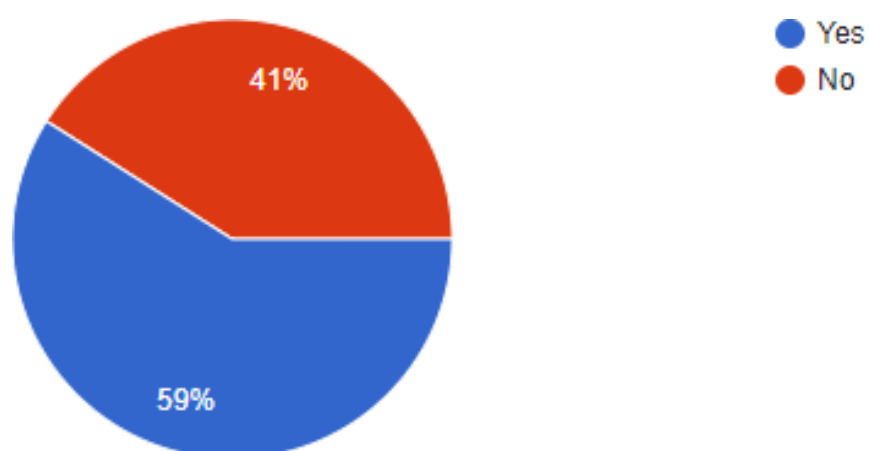
Inference

Majority (45.5%) of the respondents are packaging

Table 4.1.8

**Table showing is any complaints regard
quality degradation**

S No	Particulars	NO OF RESPONDENTS	PERCENTAGE
1	Yes	59	59.00%
2	No	41	41.00%
	TOTAL	100	100%

Chart 4.1.8

Interpretation

From the above table it is interpreted that the number of any complaints regard quality degradation yes is 59.00%, no is 41.00%.

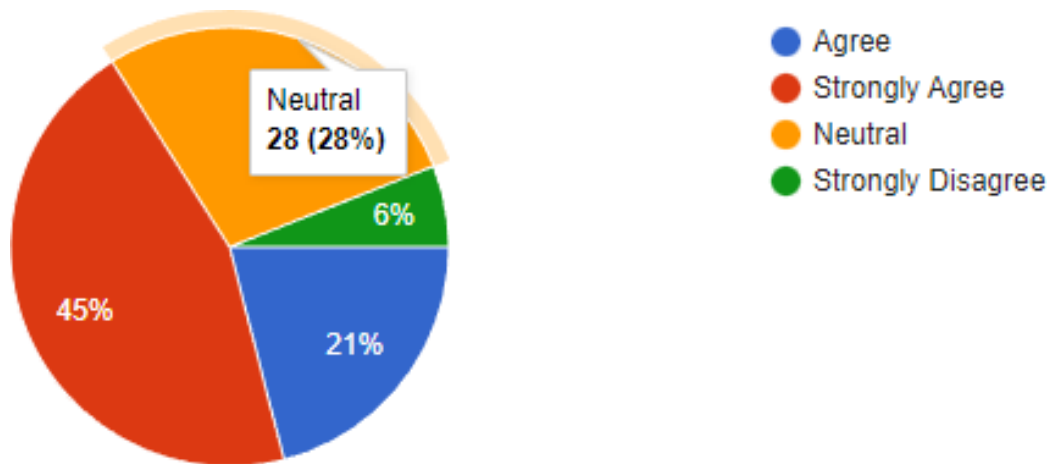
Inference

Majority (77.0%) of the respondents are yes.

Table 4.1.9

**Table showing is organization reply on
few dependable suppliers**

S No	Particulars	NO OF RESPONDENTS	PERCENTAGE
1	Strongly agree	45	45.00%
2	Agree	21	21.00%
3	Neuutral	28	28.00%
4	Disagree	0	0.00%
5	Strongly Disagree	6	6.00%
	TOTAL	100	100%

Chart 4.1.9

Interpretation

From the above table it is interpreted that the number of organization reply on few dependable suppliers agree is 21.00%, strongly agree is 45.00%, neutral 28.00%, disagree is 0%, strongly disagree is 6.00%.

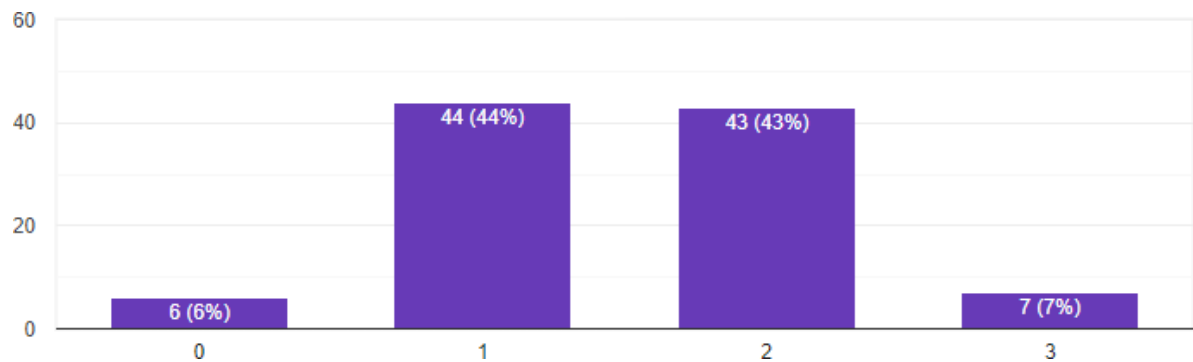
Inference

Majority (45.0%) of the respondents are strongly agree.

Table 4.1.10

**Table showing is delivery activity
of supply chain department**

S No	Particulars	NO OF RESPONDENTS	PERCENTAGE
1	0	6	6%
2	1	44	44%
3	2	43	43%
4	3	7	7%
	TOTAL	100	100%

Chart 4.1.10

Interpretation

From the above table it is delivery activity of SCM department of rating 0 is 6.00%, 1 is 44.00%, 2 is 43.00% and 3 is 7.00%.

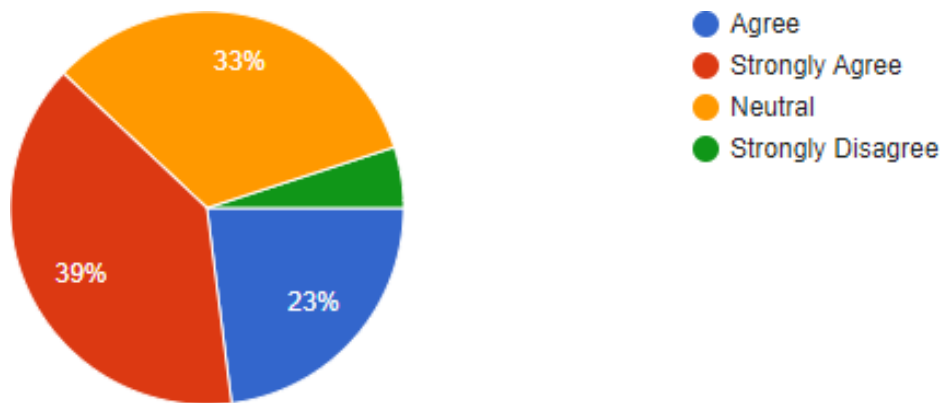
Inference

Majority (44.0%) of the respondents are given 1 rating.

Table 4.1.11

**Table showing is organization reply on
few high quality suppliers**

S No	Particulars	NO OF RESPONDENTS	PERCENTAGE
1	Strongly agree	39	39.00%
2	Agree	23	23.00%
3	Neuutral	33	33.00%
4	Disagree	2	2.00%
5	Strongly Disagree	3	3.00%
	TOTAL	100	100%

Chart 4.1.11**Interpretation**

From the above table it is interpreted that the number of organization reply on few high quality suppliers agree is 23.00%, strongly agree is 39.00%, neutral 33.00%, disagree is 2%, strongly disagree is 3.00%.

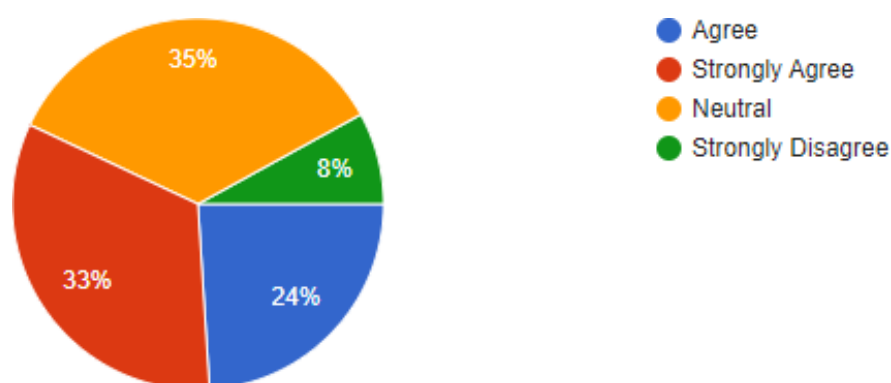
Inference

Majority (39.0%) of the respondents are strongly agree.

Table 4.1.12

Table showing is organization strive to establish long term relationship with its suppliers

S No	Particulars	NO OF RESPONDENTS	PERCENTAGE
1	Strongly agree	33	33.00%
2	Agree	24	24.00%
3	Neuutral	35	35.00%
4	Disagree	3	3.00%
5	Strongly Disagree	5	5.00%
	TOTAL	100	100%

Chart 4.1.12

Interpretation

From the above table it is interpreted that the number of organization strive to establish long term relationship with its suppliers agree is 24.00%, strongly agree is 33.00%, neutral 35.00%, disagree is 3%, strongly disagree is 5.00%.

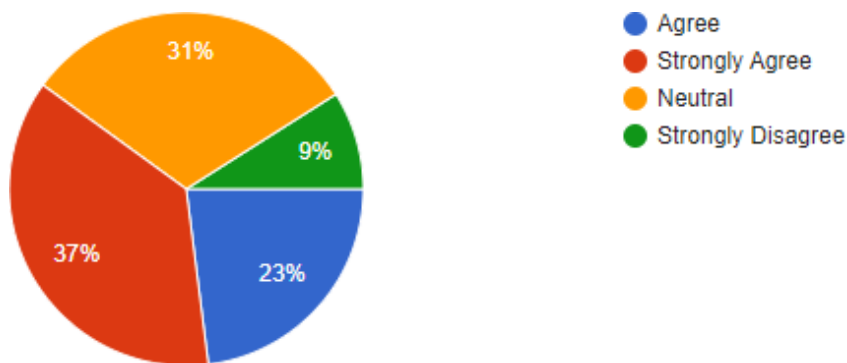
Inference

Majority (35.0%) of the respondents are neutral.

Table 4.1.13

Table showing is organization actively involves its key suppliers in new product development processes

S No	Particulars	NO OF RESPONDENTS	PERCENTAGE
1	Strongly agree	37	37.00%
2	Agree	23	23.00%
3	Neuutral	31	31.00%
4	Disagree	4	4.00%
5	Strongly Disagree	5	5.00%
	TOTAL	100	100%

Chart 4.1.13

Interpretation

From the above table it is interpreted that the number of organization strive to establish long term relationship with its suppliers agree is 23.00%, strongly agree is 37.00%, neutral 31.00%, disagree is 4%, strongly disagree is 5.00%.

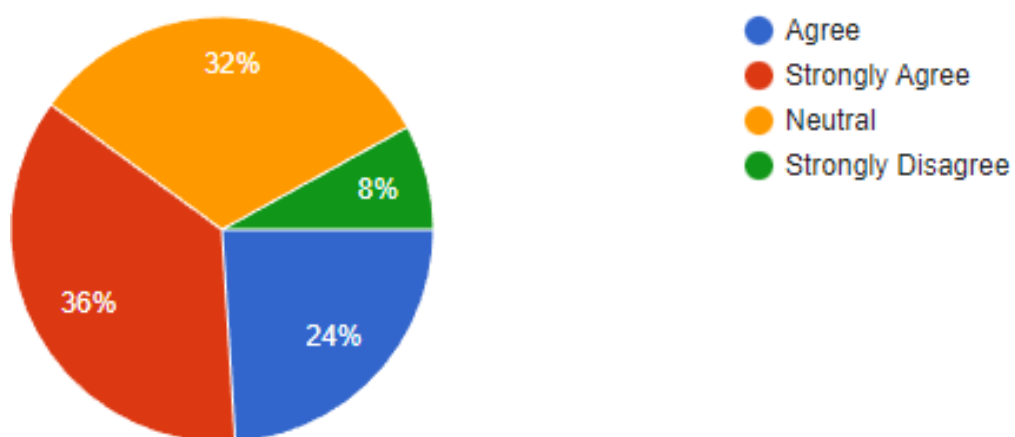
Inference

Majority (37.0%) of the respondents are strongly agree.

Table 4.1.14

**Table showing is organization certifies its suppliers
for quality**

S No	Particulars	NO OF RESPONDENTS	PERCENTAGE
1	Strongly agree	23	23.00%
2	Agree	37	37.00%
3	Neuutral	31	31.00%
4	Disagree	4	4.00%
5	Strongly Disagree	5	5.00%
	TOTAL	100	100%

Chart 4.1.14

Interpretation

From the above table it is interpreted that the number of organization strive to establish long term relationship with its suppliers agree is 24.00%, strongly agree is 36.00%, neutral 32.00%, disagree is 4%, strongly disagree is 4.00%.

Inference

Majority (36.0%) of the respondents are strongly agree.

4.2.CHI- SQUARE TEST :

Hypothesis

The following hypothesis is constructed for this study.

- ❑ H_0 : There is no significant relationship between employees experience and they facing problems in handling raw materials
- ❑ H_1 : There is significant relationship between employees experience and they facing problems in handling raw materials

➔ Crosstabs

[DataSet1]

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Experience * Choose the right option where the supply chain department is facing problem in taking care the raw material	100	100.0%	0	0.0%	100	100.0%

Experience * Choose the right option where the supply chain department is facing problem in taking care the raw material Crosstabulation

			Choose the right option where the supply chain department is facing problem in taking care the raw material				
				During storage	packaging	Tesing of packaging	Total
Experience	2-3 yrs	Count	1	25	18	6	50
		Expected Count	.5	19.5	22.5	7.5	50.0
	4-5 yrs	Count	0	5	15	3	23
		Expected Count	.2	9.0	10.4	3.5	23.0
	Above 6 yrs	Count	0	2	4	2	8
		Expected Count	.1	3.1	3.6	1.2	8.0
	Below 1 yr	Count	0	7	8	4	19
		Expected Count	.2	7.4	8.6	2.9	19.0
Total	Count		1	39	45	15	100
	Expected Count		1.0	39.0	45.0	15.0	100.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.158 ^a	9	.423
Likelihood Ratio	9.506	9	.392
N of Valid Cases	100		

a. 9 cells (56.3%) have expected count less than 5. The minimum expected count is .08.

Interpretation :

- ☐ As the significance value of hypothesis is more than 0.05
- ☐ The null hypothesis is rejected for the analysis.
- ☐ Looking at the results of the Chi - Square test there is significant difference between employees age and they facing problems in taking care of raw material.

F - TEST (One Way Anova) :

Hypothesis

The following hypothesis is constructed for this study.

- ☐ H_0 : There is no significant relationship between working strategies and delivery activity
- ☐ H_1 : There is significant relationship between working strategies and delivery activity

Oneway

Descriptives

Rate the working strategies of supply chain management department on the basis of the current programs

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	6	1.17	1.169	.477	-.06	2.39	0	3
1	44	1.48	.849	.128	1.22	1.74	0	3
2	43	1.79	.638	.097	1.59	1.99	0	3
3	7	1.57	.787	.297	.84	2.30	0	2
Total	100	1.60	.791	.079	1.44	1.76	0	3

ANOVA

Rate the working strategies of supply chain management department on the basis of the current

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.359	3	1.120	1.833	.146
Within Groups	58.641	96	.611		
Total	62.000	99			

ANOVA Effect Sizes^{a,b}

			95% Confidence Interval	
Point Estimate			Lower	Upper
Rate the working strategies of supply chain management department on the basis of the current programs	Eta-squared	.054	.000	.138
	Epsilon-squared	.025	-.031	.111
	Omega-squared Fixed-effect	.024	-.031	.110
	Omega-squared Random-effect	.008	-.010	.040

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

b. Negative but less biased estimates are retained, not rounded to zero.

Post Hoc Tests

Homogeneous Subsets

Rate the working strategies of supply chain management department on the basis of the current programs

Duncan^{a,b}

Rate the delivery activity of the department	N	Subset for alpha = 0.05 1
0	6	1.17
1	44	1.48
3	7	1.57
2	43	1.79
Sig.		.086

Means for groups in homogeneous subsets are displayed.

Interpretation :

- ☐ As the significance value of hypothesis is more than 0.05
- ☐ The null hypothesis is rejected for the analysis.
- ☐ Looking at the results of the F - test there is significant difference between working strategies of supply chain management and delivery activity of the supply chain management department.

Correlation :

Hypothesis :

The following hypothesis is constructed for this study.

- ☐ H_0 : There is no significant relationship between working strategies of supply chain management and delivery activity of the supply chain management department
- ☐ H_1 : There is significant relationship between working strategies of supply chain management and delivery activity of the supply chain management department

→ Correlations

Correlations

		Rate the working strategies of supply chain management department on the basis of the current programs	Rate the delivery activity of the department
Rate the working strategies of supply chain management department on the basis of the current programs	Pearson Correlation	1	.185
	Sig. (2-tailed)		.065
	N	100	100
Rate the delivery activity of the department	Pearson Correlation	.185	1
	Sig. (2-tailed)	.065	
	N	100	100

Interpretation :

- ☐ As the significance value of hypothesis is more than 0.05
- ☐ The null hypothesis is rejected for the analysis.
- ☐ Looking at the results of the Correlation there is significant difference between working strategies of supply chain management and delivery activity of the supply chain management department.

CHAPTER - 5

4.FINDINGS, SUGGESTIONS AND CONCLUSION :

5.1. FINDINGS :

- ✓ Majority (44.0%) of the respondents are age between 26-30 years.
- ✓ Both (50.0%) of the respondents are Male and Female.
- ✓ Majority (50.0%) of the respondents are 2-3 years experience.
- ✓ Majority (49.0%) of the respondents are given 2 rating. (working strategies)
- ✓ Majority (50.0%) of the respondents are tactical activities
- ✓ Majority (77.0%) of the respondents are yes (address of the developer branches)
- ✓ Majority (45.5%) of the respondents are packaging
- ✓ Majority (77.0%) of the respondents are yes. (quality degradation)
- ✓ Majority (45.0%) of the respondents are strongly agree.(few dependable suppliers)
- ✓ Majority (44.0%) of the respondents are given 1 rating.(delivery activity)
- ✓ Majority (39.0%) of the respondents are strongly agree.(few high quality suppliers)
- ✓ Majority (35.0%) of the respondents are neutral.(long term relationship with its suppliers)
- ✓ Majority (37.0%) of the respondents are strongly agree.(new product development processes)
- ✓ Majority (36.0%) of the respondents are strongly agree.(certifies its suppliers for quality)

5.2. SUGGESTIONS :

- ✓ The company should try to mention the name of destination in the local languages
- ✓ The staff should say about hazardous material before loading/unloading
- ✓ The company should try take steps in implementing modern equipment for loading and unloading
- ✓ They have to purchase more material handling equipment as the business growing
- ✓ The company should focus more on safe handling and fast services
- ✓ It should emphasize on warehouse facilities provided
- ✓ The company should build relationship with the industries for more contracts

5.3 CONCLUSION :

Supply Chains are a critical part of world trade. However, a Supply Chain in itself is insufficient. Only those that are efficient will succeed. In consideration of a Supply Chain to be efficient, it is crucial to understand its principal functions as well as the role played by each function in the Supply Chain's overall efficiency. Accomplishing this makes it facile to identify obstacles and impact the essential improvements. The literature review in this study presents important jargons and theoretical approaches that are generally used in academic dissertation. In consideration of clarifying the research each expression is defined in the context where it is used throughout the article. The criteria on which the Supply Chain efficiency assessment is based are identified and crucial factors that must be considered when building an efficiency measurement are emphasized.

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A STUDY ON SUPPLY CHAIN MANAGEMENT IN TILES INDUSTRIES WITH SPECIAL REFERENCE TO ROCOTILE COOL TILES MANUFACTURER INDUSTRY

QUESTIONNAIRE

1) Name :

2) Age :

- a) Below 25 b) 26 – 35
- c) 36 – 45 d) Above 45

3) Gender :

- a) Male b) Female

4) Marital Status :

- a) Married b) Unmarried

5) Educational Qualification

- a) Graduate b) Post Graduate
- c) Ph D

6) Monthly Income :

- a) Up to 15,000 b) 15,001 – 20,000
- c) 20,001– 30,000 d) 30,001 – 50,000
- e) Above 50,001

7) Family size :

- a) up to 3 b) 4 – 6
- c) more than 6

8) Type of employment :

- a) Permanent b) Temporary
- c.) Contract

9) Experience :

- a) Below 1 b) 1 – 3
- c) 3 – 5 d) 5 – 10
- e) Above 10

10) Which shift are you working?

- a) Day shift b) Night shift

11) What is your total working hour in a day?

- a) 6 b) 8
- c) 10 d) 12

12) Rate the working strategies of supply chain management department on the basis of the current programs

- a) 0 b) 1
- c) 2 d) 3
- d) 4

13) Is supply chain management having all the address of the developer branches of the company

- a) Yes b) No

14) According to the current growth process of the organization which of the following needs the progress of the production

- a) operational activities b) Tactional activities
- c) current programming strategies

15) Choose the right option where the supply chain department is facing problem in taking care the raw material

- a) During storage b) packaging
- c) testing of packaging

16) Rate the delivery activity of the department

- a) 0 b) 1
- c) 2 d) 3
- d) 4

17) Do you have any complaints regard and quality degradation?

- a) Yes b) No

18) Your organization reply on few dependable suppliers

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

19) Your organization rely on few high quality suppliers

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

20) Your organization strive to establish long term relationship with its suppliers

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

21) Your organization actively involves its key suppliers in new product development processes

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

22) Your organisation certifies its suppliers for quality

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

23) Your organisation regularly solve problems jointly with its suppliers

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

- 24) Your organisation has frequent follow-up with its customers for quality/service feedback
- a) Strongly Agree b) Agree
 - c) Neutral d) Disagree
 - e) Strongly Disagree
- 25) Your organisation's trading partners keep your organisation fully informed about issues that affecters business
- a) Strongly Agree b) Agree
 - c) Neutral d) Disagree
 - e) Strongly Disagree
- 26) Your supply chain members sharer search and development costs and results with each other
- a) Strongly Agree b) Agree
 - c) Neutral d) Disagree
 - e) Strongly Disagree
- 27) Your firm participates in the marketing efforts of its customers
- a) Strongly Agree b) Agree
 - c) Neutral d) Disagree
 - e) Strongly Disagree

