

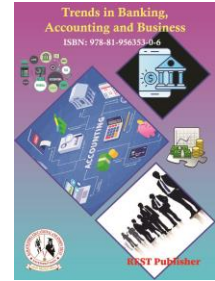


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# **A Study on Lean Supply Chain Management at Gabriel India Limited Hosur**

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**Abstract:** *Lean Supply Chain Management (LSCM) focuses on minimizing waste and maximizing value within supply chain processes. By integrating principles such as just-in-time (JIT), continuous improvement (Kaizen), and value stream mapping, LSCM aims to streamline operations, reduce costs, and enhance customer satisfaction. This approach involves close collaboration among supply chain partners to optimize inventory levels, improve process efficiencies, and ensure timely delivery of products. The ultimate goal of LSCM is to create a more agile and responsive supply chain that can adapt to changing market demands while maintaining high quality and service standards. Supply Chain Management (SCM) encompasses the planning, coordination, and execution of all activities involved in sourcing, procurement, conversion, and logistics management. It aims to create seamless operations among various entities, including suppliers, manufacturers, distributors, and retailers, to deliver products to end consumers efficiently and effectively. SCM involves the strategic alignment of these activities to optimize the flow of goods, information, and finances. By integrating processes across the supply chain, SCM seeks to enhance overall performance, reduce costs, improve customer satisfaction, and build a competitive advantage in the marketplace."*

**Keywords:** *Procurement , work flow , inventory management, distributors and retailers*

## **1. INTRODUCTION**

A Lean supply chain perhaps is the epitome of a good supply chain. It delivers supplies to a customer with the minimum of waste is defined as any extra use of resources that need not be used. So a Lean supply chain will not have any surplus, it will not need heating and lighting to store large quantities of stock and the processes used to manage stock supply will be geared up towards Lean thinking, where stock will not be surplus, but the systems used will be flexible enough to ensure that any sudden increases in demand can be met without undue delay. Lean supply chains also need to minimize the transportation and shipping of supplies. so that there are no unnecessary transport costs. This condition can often result in Lean supply chains being predominantly local to the customer or at least having some kind of depot locally so that the supplies can be quickly delivered. One interesting aspect of a Lean supply chain is that sometimes it may have to withstand some waste (i.e., keeping stock in a local depot) so that less waste is generated within the longer term, which in itself makes it a complex framework for the delivery of supplies and stock. Despite the fact that a description or overview of the nature of a Lean supply chain sounds very effective and almost breathtakingly simple, it is actually incredibly difficult to achieve. This is simply down to the fact that there are a number of demands that may be made at any given time. Systems have to be flexible to meet these demands, without having surpluses of stock and since stock cannot simply be plucked out of the air this makes life difficult for those who manage a Lean supply chain.

## **2. OBJECTIVES OF STUDY**

1. To study the significant contributor to the global economy in lean supply chain automobiles.

2. To determine lean supply chain management being adopted by automobile industry.
3. To determine the reasons for adoption of lean supply chain management by these firms:
4. To examine the challenges faced by asks automobiles among the supply fulfil to the customers.
5. To suggest there commends to improve the lean supply chain without demand.

### **3. SCOPE OF THE STUDY**

This research is an attempt to know whether this lean supply chain management concept has been accepted by manufacturing industry or not. Hence in this study focus only on Salem area automobiles from automobile industries. Business to customer is not focused since Final customers who are actually buying the automobile vehicles have not taken into consideration since they have more concern for price. performance style, convenience. aesthetic view and have very less concern about environment.

### **4. LITERATURE REVIEW**

Chengku (2019) 'Lately, rapid development of new cities in developing countries (such as India, China, and Vietnam) has accelerated the growth of the motorcycle industry in these markets. In the past, with respect to the motorcycle industry, the lack of adequate systems to control the quantity of overloaded polluting products has led to serious environmental problems. In order to reduce damage to the environment, this paper presents a process-based reference model and information system that can be used by the motorcycle industry to better manage and control the quantity and quality of the supply network. The IDEF (integration definition) tool set is applied to describe the overall operational workflow.

Bradley J.Flamm (2020) We consider constraints that prevent people with environmental concerns from buying "green" vehicles that are smaller, more fuel-efficient, and less polluting by using a series of focus group discussions. We find that the features of vehicles currently on the market, family and work responsibilities, residential choices, and routines and preferences all act as constrains.

C.J.Caniels (2020) The public increasingly holds companies accountable for environmental misbehaviour in their supply chains. To offset that risk corporations, start initiatives to green their supply chains. Yet suppliers often fail to properly participate in these initiatives. This paper presents a conceptual framework to explain supplier participation in green initiatives, by investigating customer requirements, supplier readiness, relational norms and customer investment as possible drivers.

Athena Rouboutsos (2021) Urban freight vehicles significantly impact the urban environment due mainly to traffic congestion, reduction in road capacity and pollutant emissions Introducing low emission vehicles is one of the major measures foreseen in alleviating negative externalities. In this context, city logistics may represent a market niche for the deployment of electric vehicles.

Sergio Cherubinied all (2022) In the electric car industry the service component assumes considerable importance and it is a relevant factor in purchasing decisions. Therefore, proper management of the Product-Service System" (PSS) is essential. This article aims to 1) identify the main sub-systems of the PSS in the electric car industry and 2) identify the critical success factors (CSFs) in marketing. The review of the literature led to the definition of four sub-systems vehicle, infrastructure, on-board electronics, and energy. Based on these PSS sub-systems, organisations belonging to each sub-system were selected. and five Gers were interviewed.

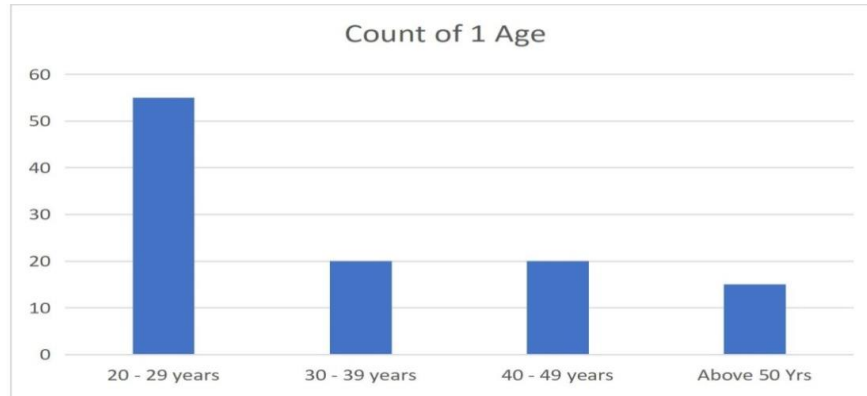
### **5. RESEARCH METHODOLOGY**

Research methodology for lean supply chain involves a systematic and structured approach to studying the application of lean principles in supply chain management. The objective is to identify the factors that can help organizations achieve operational efficiency, reduce waste, and increase customer value.

**Data Analysis and Interpretation**

**TABLE 5.1.1** Respondents of The Age

AGE	RESPONDENTS	PERSENTAGE
20- 29years	55	50
30- 39years	20	18.18
40- 49years	20	18.18
Above50Yrs	15	13.64
TOTAL	110	100



**Interpretation**

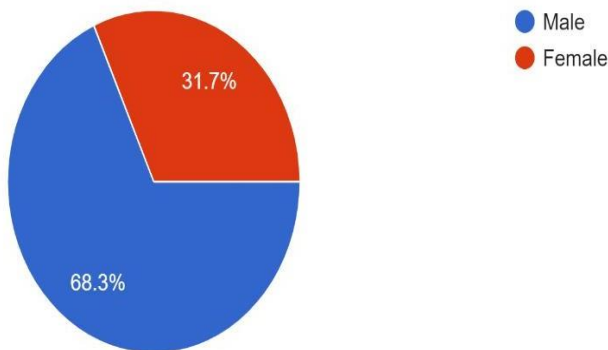
The above bar graph depicts that 50% of respondents belongs to the age group of 20 -29 years ,18.18% of respondents belong to the age group of 30-39 years,18.18% of respondents belong to the age group of 40-49 years and 13.64% of respondents belongs to the age group of above 50 years.

**TABLE 5.1.2** Respondents of The Gender

GENDER	RESPONDENTS	PERCENTAGE
MALE	55	50%
FEMALE	55	50%
TOTAL	110	100

**2. Gender**

104 responses



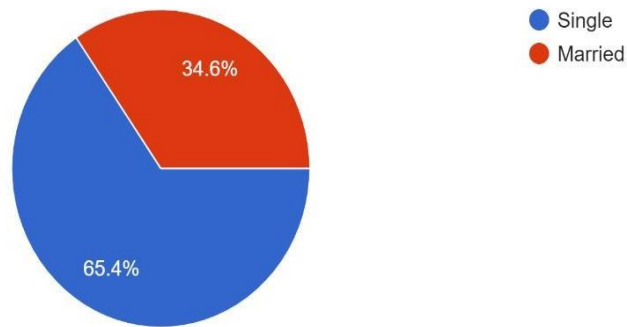
Interpretation: The above pie chart depicts that 65.4% of the respondents are single and 34.6% of the respondents are married.

**TABLE 5.1.3** Respondents of Married status

MARRIED STATUS	NO OF RESPONSES	% OF RESPONSE
SINGLE	65.4	65.40%
MARRIED	34.6	34.60%
TOTAL	110	100

3. Married Status

104 responses



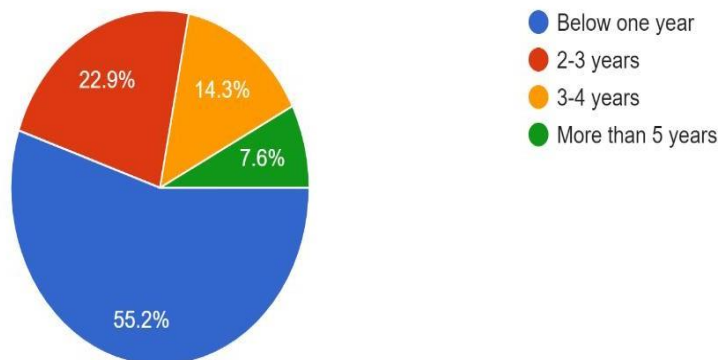
Interpretation: The above piechart depicts that 65.4% of the respondents are single and 34.6% of the respondents are married. Thus, the majority of the respondents are single.

**TABLE 5.1.4** Respondents of The Experience

EXPERIENCE	RESPONDENTS	PERCENTAGE
Below one year	62	56.36%
2-3 years	24	21.82%
3-4 years	15	13.64%
More than 5 years	9	8.18%
TOTAL	110	100

6.Experience

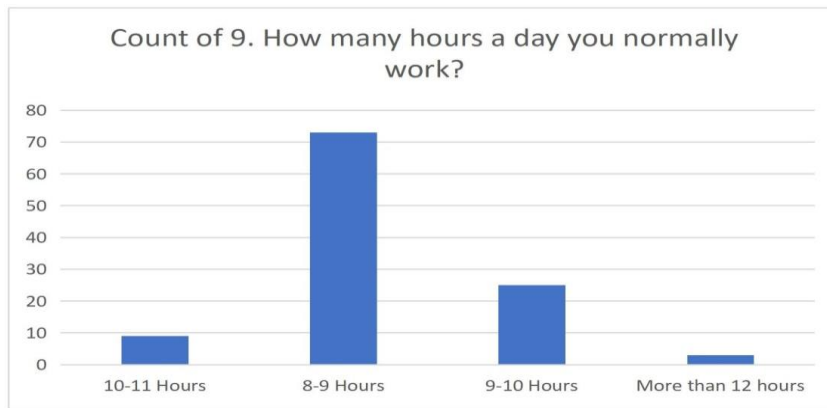
105 responses



Interpretation: From the above pie chart, we infer that the 56% & 21% of the data collected from the above Below one Years & 2-3 Years of the Respondents, 8% of the data are from the More than 5 Years of the employees, 13% of data are collected from 3-4Years of the Respondents.

**TABLE 5.1.5** Respondents of The Working Hours

WORKINGHOURS	RESPONDENTS	PERCENTAGE
8-9 Hours	73	66.36
9-10 Hours	25	22.73
10-11 Hours	9	8.18
More than12 hours	3	2.73
TOTAL	110	100.00



Interpretation: The above bar graph reveals that 66.36% of respondents will work for 8-9 hours, and 9-10 hours respondents for 22.73%, 10-11 hours respondents 8.18% and 2.73% respondents for more than 12 hours.

PARTICULAR	RESPONDENTS	PERCENTAGE
Agree	50	0.45
Disagree	25	0.23
Strongly agree	20	0.18
Strongly disagree	15	0.14
TOTAL	110	1.00



Interpretation: The above barograph reveals that 0.45% respondents are agree, 0.23% are disagree, 0.18% of respondents are strongly agree, 0.14% of respondents are strongly disagree.

**CHI-SQUARE TEST**

Age *Are you satisfy with working hours and is it fit with your private life ? Cross tabulation								
Count								
Are you satisfy with working hours and is it fit with your private life ?								
AGE							Chi- squaree value	
								p value
						Total		
		Strongly satisfied		Strongly dissatisfied				
			Satisfied	Dissatisfied				
Above 50years	N	30	15	5	5	55	134.286a	0.001
	%	27.27273	13.636	4.5455	4.5455	50		
40-49	N	0	0	20	0	20		
Years	%	0	0	18.182	0	18.182		
30-39	N	0	20	0	0	20		
Years	%	0	18.182	0	0	18.182		
20-29	N	0	0	10	5	15		
Years	%	0	0	9.0909	4.5455	13.636		
Total	N	30	35	35	10	110		
	%	27.27273	31.818	31.818	9.0909	100		

Interpretation: Since the P value is lesser than 0.05, rejected the null hypothesis, accepted a alternative hypothesis 0.001, level of significance 5%. Hence there is no significant difference between the Age of the respondent and working hours which fits for the private life as demonstrated by the CHI-SQUARE (e value=134.286a, p value=0.001). Based on overall percentage, 50% of respondents are between the age group of above 50 years, 18.1% of respondents are between the age group of 40-49 years, 18.8% of respondents are between the age group of 30-39 years and 13.6% of respondents are between the age group of 20-29 years.

**6. FINDINGS**

1. 50% of the respondents are male.
2. 65.4% of the respondents are single.
3. 58.18% of the respondents are under graduate.
4. 56.36% of the respondents are working below 1 years.
5. 66.36% of the respondents are working for 8-9 hours per day.
6. 6.45% of the respondents are agree.
7. The finding says that there was a statistical difference between respondents towards experience and the supplier selection.

**7. SUGGESTIONS**

Map your supply chain: Start by mapping your supply chain to identify areas where there are inefficiencies, redundancies, or waste. Look for opportunities to streamline processes, eliminate unnecessary steps, and improve communication between different stakeholders in the supply chain. Reduce inventory: Keeping large amounts of inventory on hand ties up capital and increases the risk of waste. Instead, implement a just-in-time (JIT) inventory

system that ensures you have the materials you need when you need them. This approach can help you reduce waste, save money, and increase efficiency. Work closely with suppliers: Your suppliers are an important part of your supply chain, and working closely with them can help you identify opportunities to reduce waste, improve quality, and streamline processes. Consider developing long-term relationships with suppliers and working collaboratively to identify opportunities for improvement. Focus on quality: Quality is essential in a lean supply chain. Poor quality products can lead to waste, delays, and extra costs. Implement a robust quality control system that includes testing and inspections throughout the supply chain. Use technology: Technology can help you automate processes, improve communication, and increase efficiency. Consider using tools such as supply chain management software, automated tracking systems, and online collaboration tools to streamline your supply chain. Continuously improve: A lean supply chain is one that is always looking for ways to improve. Establish a culture of continuous improvement within your organization and encourage all stakeholders in the supply chain to share ideas and suggestions for how to make things better

## 8. CONCLUSION

A lean supply chain is a framework for optimizing the flow of goods and services from suppliers to customers while minimizing waste and maximizing value creation. It emphasizes the importance of continuous improvement, waste reduction, and close collaboration between all members of the supply chain. Implementing a lean supply chain can result in significant benefits, including increased efficiency, lower costs, improved quality, better customer satisfaction, and increased competitiveness. However, it requires a significant investment of time and resources, as well as a cultural shift towards continuous improvement and a willingness to change established processes. To successfully implement a lean supply chain, organizations should focus on identifying and eliminating waste, improving communication and collaboration between suppliers and customers, optimizing inventory levels, and developing a flexible and responsive supply chain that can quickly adapt to changing customer demands and market conditions. Overall, a lean supply chain can help organizations achieve greater efficiency, reduce costs, and improve customer satisfaction, ultimately leading to increased competitiveness and long-term success.

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