



## A Study on Cost- Reduction Techniques Used In Supply Chain Management with Special Refernce Havells India Ldt Coimbatore

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**ABSTRACT :** The Indian automotive industry, comprising vehicle and component manufacturers, has grown steadily. The arrival of major global auto companies has galvanised the domestic sector into adopting develop and integration Supply Chain best practices. This has enhanced competitiveness leading to a quantum growth in exports. However, Havells industry has to operate in a unique environment further posing challenges to the already complex automobile supply chain. Therefore, a need is felt to continually study supply chain practices in this sector from a contemporary, practitioner’s viewpoint in order to identify key factors of differentiation which would ultimately provide competitive advantage. This paper seeks to understand the present status, complexities and challenges facing the sector. It examines trends such as visibility and innovation, collaboration and supply networks and evolving leadership roles impacting supply chain effectiveness. Strategies for overcoming challenges are presented as also a framework for further study and analysis.

**Keywords :** Develop and integration, Supply Chain best practices, competitive advantage, supply chain effectiveness

### I. INTRODUCTION:

In logistics, inventory Methods & Models of essential to an organization’s success and performance. Inventory models are tools that help to optimize the number of products companies needs to keep in their warehouses or points of sale do business. The various applications of inventory models enable you to reduce stock-related costs, avoiding surpluses and ensuring you always have

enough merchandise on hand to meet your customers’ needs. Maintaining adequate stock levels streamlines operations. It also facilitates the transport and distribution of the products, improving customer service.

Effective stock management or stock maintenance system is used to track, manage and maintain inventory levels. The primary aim is to make sure you

never have too little or too much stock. Effective stock management system enables inventory tracking along with their location and condition. It also helps with sales tracking and understanding which products are selling well.

In addition, it supports you in the creation of purchase orders by providing inputs on which products need to be ordered, when they need to be ordered and from whom they need to be ordered.

### II. LITRATURE REVIEW:

**Chalotra, V. (2019)** Inventory management involves a trade-off between the costs associated with keeping inventory versus the benefits of holding inventory. The benefit of an inventory is to assure that goods will be available as required. The primary costs of an inventory are the opportunity cost of the capital used to finance the inventory, ordering costs, and storage costs. Inventory management seeks to maximize the net benefit– the benefits minus costs – of the inventory

**Viswanath Cvsa (2020)** proposed the supply chain and even the finished products and raw materials connected and sold finished products to consumers a versatile network tool. Song Hua extensively



researches the costing accounting method about enterprise logistics that can be applied in the logistics cost accounting. Logistics cost accounting is particularly suitable distribution industry and manufacturing industry, but there are not a lot of studies on the costs of third-party logistics control.

**Nazário, (2023)** The combination of structured processes and large volume of transactions increases the emphasis on information system efficiency. From it, the main logistic transactional process occurs: the order cycle. With this, all activities and events belonging to this cycle must be processed: order entry, credit check, inventory allocation, issuing notes, shipping, shipping and arrival of the product to the customer. Information about such activities/events should be readily available, as order status is an increasingly necessary issue for good customer service

#### STATEMENT OF PROBLEM

Assembling organizations lately are confronted with the issue of significant expense of creation. Huge piece of this expense could be followed to the expense of inventories which result from the failure of the administration to have a successful authority over them. Most assembling associations have consistently focused on having sufficient stock for their creation and henceforth their endurance. Basically, stock administration, inside the setting of the previous highlights includes arranging and control.

The control viewpoint, which is frequently depicted as stock control includes following the method, set up at the arranging stage to accomplish the above goal. This may incorporate observing stock levels intermittently or consistently and choosing what to do base on data that is assembled and satisfactorily prepared. Exertion should be made by the administration of any association to strike an ideal interest in stock since it costs a lot of cash to secure capital in abundance stock.

#### OBJECTIVES

- To develop and integrate regional and global supply chains to enhance international business and trade.
- To determine strategies aimed at minimizing investment levels within the logistics company.
- To identify administrative challenges arising from inadequate stock control and propose solutions.

- To evaluate existing stock management techniques to gauge their effectiveness and understand the importance of appropriate investment in inventory.
- To utilize tactics such as warehouse optimization, transportation mode selection, and route optimization to enhance the transport function.

### III. RESEARCH METHODOLOGY

Research methodology is a way to systematically solve research problem. Research methodology is understood as a source of the study how to research is done scientifically. The various steps adopted by a researcher in studying the research problem along with the logic. The project work entitled “Analysing inventory models and methods for effective stock management and cost reduction”

#### METHOD OF COLLECTION

Primary data:

Primary data are unique and recently gathered by the researcher. primary data for this study were gathered via questionnaires. Using a questionnaire is a common way to get primary data. A list of questions for oneself is called a questionnaire.

The commonly used statistical tools for analysis of collected data are:

- Percentage analysis
- Chi-square analysis
- Correlation analysis
- regression analysis

#### PERCENTAGE ANALYSIS

Percentage refers to a special kind of ratio. Percentage is used in making comparison between two or more series of data. Percentage is used to describe relationship. Percentage can also use to compare the relationship.

#### CHI-SQUARE ANALYSIS

The Chi-square test is one of the simplest and most widely used non-parametric tests in statistical work. The quantity  $\chi^2$  describes the magnitude at the discrepancy between theory and observation. The calculated value at Chi-square. Is compared with the table value  $\chi^2$  given degrees of freedom at a creation specific level of significance



### CORRELATION ANALYSIS

There are several different correlation techniques. The survey systems optional statistics module includes the most common type, called the person or product moment correlation. The module also includes a variation on this type called partial correlation. The latter is useful when you want to look at the relationship between two variables while removing the effect of none or two other variables

### REGRESSION ANALYSIS

A statistical technique that relates a dependent variable to one or more independent (explanatory) variables. A regression model is able to show whether changes observed in the dependent variable are associated with changes in one or more of the explanatory variables.

### SECONDARY DATA

Secondary data is the data, which is already available. It can be obtained through company records, internet and some data collected from the observation method by the researcher.

### LIMITATIONS

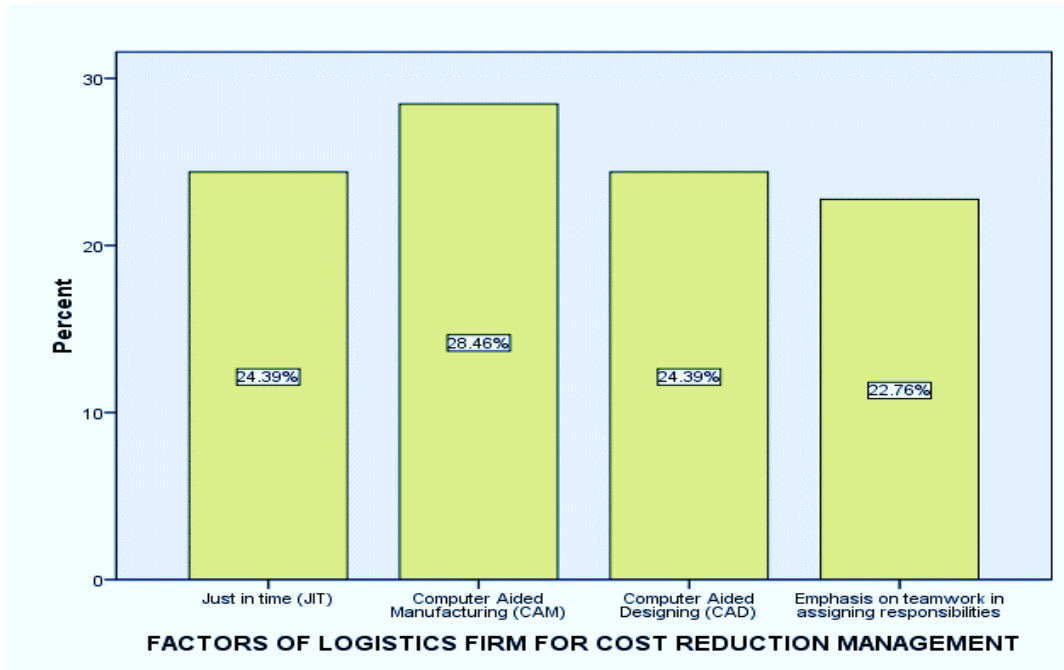
- It does not deal with stock management used by logistics manufacturing company.
- Most of the company irresponsible while answering because of un interested and lack of time
- The collected information may be on exaggerated.
- The researcher finding has been applied only to Coimbatore town.

## IV. DATA ANALYSIS AND INTERPRETATION

### PERCENTAGE ANALYSIS

#### Factors of logistics firm for cost reduction management

FACTORS	RESPONDENTS	PERCENTAGE
Just in time (JIT)	30	24.4%
Computer Aided Manufacturing (CAM)	35	28.5%
Computer Aided Designing (CAD)	30	24.4%
Emphasis on teamwork in assigning responsibilities	28	22.8%



### INTERPRETATION

The above table shows that factors of logistics firm for cost reduction management, 24.4% of the respondents said firms implement just in time (JIT), 28.5% of the respondents said firms implement computer aided manufacturing (CAM), 24.4% of the respondents said firms implement computer aided designing (CAD) and remaining 22.8% of the respondents said firms implement emphasis on teamwork in assigning responsibilities

Majority 28.5% of the respondents said firms implement computer aided manufacturing (CAM) factors of logistics

### CORRELATION ANALYSIS:

CORRELATION			
		Experience of the respondents	Opinion about production based on forecasted demand or actual demand
Experience of the respondents	Pearson Correlation	1	.912**
	Sig. (2-tailed)		.000
	N	123	123
Opinion about production based on forecasted	Pearson Correlation	.912**	1
	Sig. (2-tailed)	.000	



demand or actual demand	N	123	123
**. Correlation is significant at the 0.01 level (2-tailed).			

### INTERPRETATION

From the output the Correlation test, the value obtained is less than 0.01 interpreted that null hypothesis (Ho) is accepted. Thus the relationship

between experience of the respondents and opinion about production based on forecasted demand or actual demand

ANOVA							
Division/section of the respondents		Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	(Combined)	150.669	4	37.667	225.199	.000	
	Linear Term	Unweighted	138.675	1	138.675	829.086	.000
		Weighted	145.395	1	145.395	869.263	.000
		Deviation	5.274	3	1.758	10.510	.000
Within Groups		19.737	118	.167			
Total		170.407	122				

### INTRODUCTION

a. Uses Harmonic mean sample size = 23.349

b. From the above analysis, we find that calculated value of the F-value is a positive 225.199 value, so H1 accept.

Since the P value 0.000 is less than <0.05 regarding there is a signification relationship between division/section of the respondents and responsibilities of stock management for logistics. The results are significant at 4% level.

### V. FINDINGS, SUGGESTION AND CONCLUSION

#### FINDINGS

- Majority 40.7% of the respondents are satisfied with lead time and review period length

- Majority 26.0% of the respondents said improving customer service is important for stock management
- Majority 28.5% of the respondents said firms implement computer aided manufacturing (CAM) factors of logistics



- Majority 33.3% of the respondents are neutral with production based on forecasted demand or actual demand
- Majority 43.1% of the respondents are provide 1<sup>st</sup> rank to production cost efficiency, 42.3% of the respondents

### SUGGESTION

- The company should be encouraged to form groups through which they could use to source inputs such as seeds in bulk.
- This is because such avenues offer the benefit of reduction in per unit cost of input due to economies of scale as

### CONCLUSION

The data of the studied companies disclose that after the implantation of the new process the operational costs reduced and they became more competitive with their competitors and partners in the productive chain, since the managers started to acquire improved visibility of their business and a sensible improvement in the time of reply to the demands, leading to the best profit margins.

It can be concluded that SCM, in these studied companies, receives a strong impact from the supply chain, bringing benefits and modifying the form of the company's actions. The costs that involve the supply chain and the total logistic cost must be controlled with accuracy; therefore, they make the great differential in the full attendance to the customer and the total satisfaction. The limitation is the difficulty of locating more complete data on all the companies operating in the particular area.

- opposed to buying from private sources such as agro vets.
- Inputs contribute a great proportion of company cost and therefore good input sources may boost company incomes
- The company should make use of all the timely information regarding new technology, trends, and competitor's strategy.
- The company must use efficiently, the bench marking technique to face competition which is very much faced by the firm

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