



A brief study on inventory management at Larsen & Toubro Komatsu limited

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Abstract

In the area of supply chain management, Inventory management is very crucial and challenging problem. Inventory occupies a major amount of working capital in any company/organisation thus efficient management and control is required. Any small changes or minor errors may lead to the unnecessary problems like freezing up of funds in the inventory or scarcity of the stock or sudden rise in the inventory costs. Therefore it is required to manage the inventory by using scientific and systematic methods.

Keywords: EOQ, JIT, order cost, carry cost

1. Introduction

Inventory management is one of the important and integral part in managing a company. Inventory management is an important aspect of capital that covers the efficiency of production in a manufacturing firm. It is concerned with the inventory management and in the cost reduction thus achieving the efficiency.

Inventory is a resource that any company holds in stock with the intention of selling or converting it into a more valuable state. A large amount of finance is required for managing the inventory. So there is a continuous supervision of the management and managers to control and supervise the various aspects of inventory management. The crucial task in managing the inventory is assessing the amount of investment and procuring the inventory on time. Business failures in inventory arises when there is too large or too small of inventory. The production in any company haults when there is stock out of inventory. Inventory management indicates the framework of managing the inventory and gives the answers for keeping the stock in safety and lead time. Inventory management has become the crucial entity in any company to meet the upcoming demands in most entities.

2. Objectives

1. To analyse the ratios related to inventory.
2. To study the inventory management effectiveness by way of various techniques.
3. To study the Inventory management control measures.
4. To find out the method used by the firm/Organisation in managing and stocking the inventory.

Scope

The research was conducted in Larsen & Toubro Komatsu, Bangalore is limited to the inventory performance of the Larsen & Toubro. It covers different ratios with respect to the inventory and its relevant turnover ratios which includes the collection of data from various sources like annual reports, Balance sheets etc. The study also includes the various techniques that are to control the raw materials, work in progress and finishes goods like ABC, EOQ, and JIT etc.

3. Research Methodology

The quality of project work depends on the methodology adopted for the study. The research is based on collection of data.

Primary data

The sources of primary data may be:

- Personal Interview
- Field Work
- Survey method
- Observation method

Secondary data

The secondary data are collected from the published sources of Larsen & Toubro Komatsu and the data is used for analysing the problem.

- Annual reports and financial statements
- Previous records
- Text Books

4. Tools and Techniques

In order to achieve effective inventory, effective control system inventory is required. Proper inventory control not only helps in solving the liquidity problems but also increase the profits and thereby reducing the working capital of the concern.

(A) Ordering systems of inventory

The problem at the initial stage of inventory is to take decision on the re-order point. The re-order point depicts when an Order should be raised. The reorder point can be found out with the help of

- a. Average usage scenario
- b. Duration of lead Time
- c. Economic order quantity

There are three prevalent systems of ordering and a concern can choose anyone from these.

1. Economic order quantity system.
2. Periodic review system
3. Single and scheduled part delivery system.

(B) Determination of Economic Order Quantity

Decision on how much to procure has great impact on inventory management. EOQ is the lot size to be procured which is very much economic. i.e. quantity of materials purchased at minimum cost. The cost of inventory in EOQ is divided into ordering costs (cost of transportation, stationary) and carrying costs (Storage cost, Insurance etc.).

$$EOQ = \frac{\sqrt{2As}}{I}$$

A = Annual consumption

S = order cost

I = Inventory cost

(C) JIT – Just In Time Inventory Control

In this the company should maintain the inventory level to the minimum and depend on suppliers so as to provide parts and components “Just in time” by meeting the requirements of assembly. Also keeping the stock in safety to provide protection against the uncertainties of supply and consumption thus reducing the cost of order and also the cost of safety thus maintaining the long term healthy relationship with supplier.

The firm may establish a program of inventory monitoring and control consisting of the following.

1. Exercise of vigilance against imbalances of raw materials and work in progress which tends to limit the utility of stocks.
2. Shortening of production cycle.
3. Follow strictly to production batch timings.
4. Disposing the unusually slow moving terms by way of special pricing.
5. Finding out the fluctuations in sales continuously to the extent possible.
6. Vigorous efforts to expedite completion of unfinished production jobs to get them into saleable condition.
7. Continuous improvement in the design of components and parts which are available.

5. Data Analysis and Interpretation

Ratio analysis

(i) Inventory turnover ratio

The ratio indicates the number of time the inventory is replaced during the year it measures the relationship between the costs of goods sold and inventory level.

Inventory Turnover ratio = Sales/Inventory

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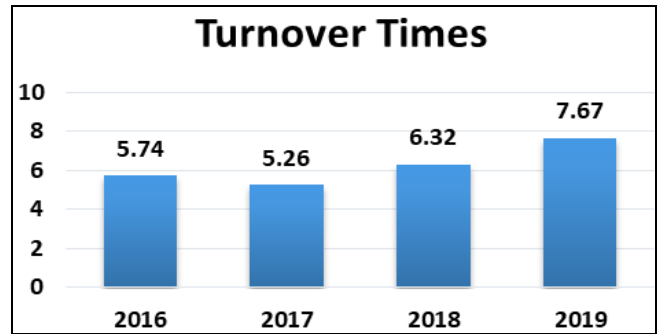
Table 1: showing the percentage of inventory turnover ratio for period 2016-2019 (Rs. In Lakhs)

Year	Net sales	Average Inventory	Turnover times
2016	1100.68	191.667	5.74
2017	1055.88	200.36	5.26
2018	1214.52	192.033	6.32
2019	1496.62	195.035	7.67

Analysis

The table shows that the inventory turnover ratio was 5.74 for the year 2016 that is taken as the base year and the net sales was 1100.68 lakhs and average inventory was 191.667 lakhs. During the year 2017 the turnover was reduced due to

the decrease in sales and in year 2018 the turnover raised to 6.32 due to the increase in the sales.



Graph 1: showing the inventory turnover ratio

Interpretation

The inventory turnover times was 5.74 in 2016 and it starts improving from 2018 i.e. 6.32 shows there is control over in inventories than the previous year.

(ii) Finished Goods Turnover ratio

Ratio represents the number of times the finished goods inventory turned over sales during a year. This gives the information about the efficiency of the firm in selling its products.

$$\text{Finished goods Turnover ratio} = \frac{\text{Net sales}}{\text{Average finished goods}}$$

$$\text{Avg finished goods} = \frac{(\text{Opening stock} + \text{closing stock})}{2}$$

Table 2: showing finished goods turnover ratio for period 2016-2019. (Rs. In Lakhs)

Year	Net sales	Average finished goods	Turnover ratio
2016	1100.68	18.15	60.64
2017	1055.88	18.114	58.29
2018	1214.52	19.25	63.09
2019	1496.62	23.45	64.39

Analysis

The table depicts that the company had blocked 60.64 and 58.29 times of finished goods in its net sales during 2016 & 2017. It increased in the following year 2018 to 63.09 and further to 64.39 in the year 2019.



Graph 2: Showing the finished goods turnover ratio

Interpretation

The turnover ratio decreased to 58.29 in the year 2017 which is not good for company but shows a positive increase in the year 2018 i.e. 63.09 times which gives the information about efficiency of the firm in selling the products.

7. Limitation

Inventory management is an important function which affects the reliability of stability production and profitability of the organisation. Inventory constitutes the largest part of current assets in any organisation. Poor management of inventory results result in the business failure. Efficient control of the inventory can contribute the overall profit-position of the organisation.

Today most of the firms are not centralised in operations but they are decentralising on basis of areas of excellence in operations. The company follows JIT inventory control system where it is found a better inventory control technique for the company. But in the present scenario it is important to implement inventory control not as a routine function but as a specialised function of management.

In Larsen & Toubro Komatsu rate of inventory increased over the year except during the times of recession. So necessary steps have to be taken by the management to further excise control over the inventories of the company. They have to adopt new techniques and new methods of production process in order to increase the production of the company. Hence there is scope of improvement in the management of Larsen & Toubro Komatsu. A better management of inventory will surely help the firm in solving the problem facing by company with respect to the inventory which will pave way for reducing the investment. Inventory is physical asset of company that can create problem if there is shortage, while in production and also if it's excess even after production.

From the study it is predicted that future sales have to be achieved and inventory level have to be maintained. The company has to be periodically review the inventory to avoid production loss.

- The field of inventory management is quite large. The study is confined to one organisation i.e. Larsen & Toubro Komatsu Ltd.
- The study was conducted drawing help from sources that are available and within the limited period of time.
- Discussion with all concerned could not be completed for want of time and opportunity.
- Suitable assumptions are made wherever necessary.

8. References

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