

A Study on Inventory Management

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ABSTRACT

Inventories are assets of the firm and require investment and hence involve the commitment of firm's resources. Every firm is required to manage the inventories in such a way as to get the best returns. The inventory management seeks to maximize the wealth of the share holders by minimizing the cost of procuring and maintaining. Inventories are assets of the firm and hence involve the commitment of firm's resources; managers must ensure that the firm maintains inventories at the correct level. The objective behind the inventory management is maintaining sufficient stock of raw materials ensuring continuous supply to production process for uninterrupted production schedule and minimizing the total annual cost of maintaining inventories Risk, Return, Beta & Sharp Value.

KEYWORDS: Inventory Management, VED analysis, EOQ, stock levels

INTRODUCTION

Inventory is composed of assets that will be showed in future in the normal course of the business operations. The assets which firms store as inventory in anticipation of need are:

- Raw materials
- Work in process (Semi Finished goods)
- Finished goods

The raw material inventory contains item that are purchased by the firm from other and are converted into finished goods through the manufacturing (production) process. They are an important input of the final product. The working process inventory consists of items currently being used in the production process.

A finished goods represented final or completed products which are available for sale .The inventory of such goods consists of items that have been produced but are yet be sold.

Need for the study:

It is important for an organization to know its inventory to achieve efficient and fast operations at an affordable cost. So, the study helps to know what techniques are used for managing inventory and how inventory management helps in continuous production in Ultratech cement ltd.

Scope of the study:

The study is confined to inventory management in Ultratech cement ltd. for a period of 5 years i.e., from 2014-15 to 2018-19.

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Objectives of the study:

- To study the inventory management techniques used in Ultratech Cement Ltd.
- To analyze various stock levels of inventory maintained by the Ultratech Cement Ltd.

Research methodology:

The study is based on the

Primary data:

Primary data is collected through interacting with officers of finance and accounts department, purchasing department and stores department.

Secondary data:

Secondary data which is collected through annual reports and websites of Ultratech cement ltd.

Website:

www.adityabirla.com
www.ultratechcement.com

Limitations:

- The study is confined to inventory management at Ultratech cement ltd.

The study covers only the period of 5 years data from 2014-15 to 2018-19.

Hypothesis:

Null hypothesis (H₀): There is no significant impact of inventory cost on net profit

Alternate hypothesis (H₁): There is significant impact of inventory cost on net profit

VED analysis:

The VED analysis is based on the criticality of the items.

V-vital items E-essential items D-desirable

Vital items:

Such items are those which when required, and not available, they make the whole system in operative.

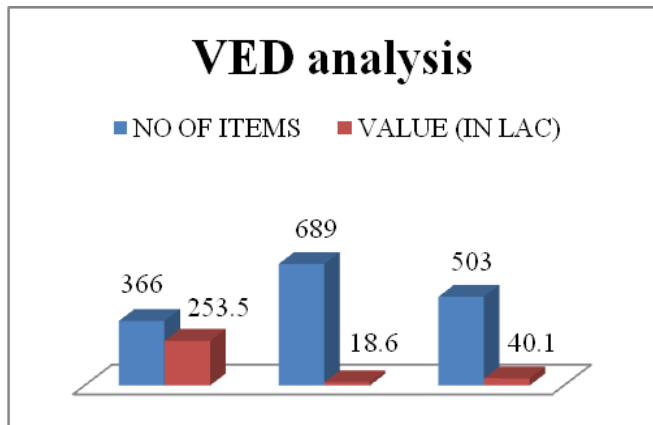
Essential items:

Those items which when demanded, and not available reduce the efficiency of the system are called essential items.

Desirable items:

Desirable items are such that even if they are not available, they neither stop the system nor reduce its efficiency but it will be good if they are present in the system.

ITEM TYPE	NO OF ITEMS	VALUE (IN LAC)
VITAL	366	253.5
ESSENTIAL	689	18.6
DESIRABLE	503	40.1



Interpretation:

The organization is maintaining a high value 253.5 of vital items 366 when compared with the values of essential and desirable items.

EOQ analysis:

EOQ (Economic Order Quantity) is the optimum quantity of an item to be purchased at one time in order to minimize the combined annual costs of ordering and carrying the item in inventory.

It is defined as the quantity of materials to be ordered at one time which minimizes the wastage and cost.

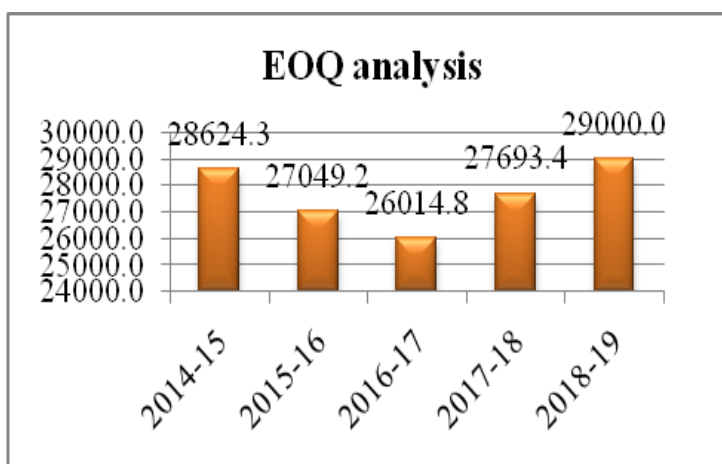
Economic Order Quantity is given by the formula:

$$EOQ = \sqrt{\frac{2 \cdot A \cdot O}{C}}$$

Where, A = Annual consumption O = Ordering cost and C = Carrying cost

EOQ analysis for 2014-15 to 2018-19

Years	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Consumption (in units)	1058200	995456	950080	949523	936210
Ordering cost	5420	5145	5200	5250	5300
Carrying cost	14	14	14.6	13	11.8
EOQ	28624.3	27049.2	26014.8	27693.4	29000.0

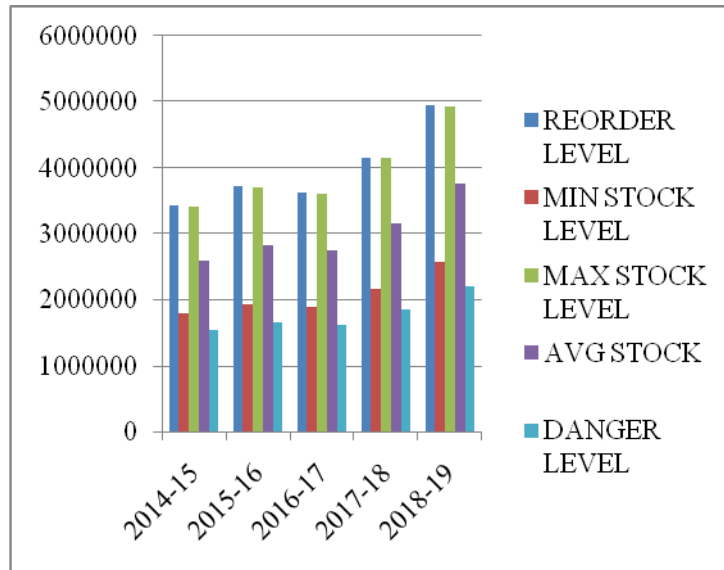


Interpretation:

From the graph it is observed that EOQ of inventory is in decreasing level from 25624.3 in the year 2014-15 to 26014.8 in the year 2016-17. After that it start increasing from 27693.4 in the year 2017-18 to 29000 in the year 2018-19. It means the wastage and cost was reducing from 2016 onwards.

Stock levels:

YEAR	REORDER LEVEL	MIN STOCK LEVEL	MAX STOCK LEVEL	AVG STOCK	DANGER LEVEL
2014-15	3426425.3	1786115.3	3409437.6	2597776.4	1530956
2015-16	3715402.2	1936752.2	3698015.4	2817383.8	1660073.3
2016-17	3621828.3	1887974.3	3596785.1	2742379.7	1618263.7
2017-18	4155540.5	2166186.0	4141415.9	3153800.9	1856730.8
2018-19	4947763.1	2579153.1	4925145.1	3752149.1	2210702.6



Interpretation:

It is observed from the graph that all types of stock levels are increasing year by year with moderate changes. From this we can say that all types of stocks are maintaining properly.

Hypothesis:

Null hypothesis (H₀): There is no significant impact of inventory cost on net profit

Alternate hypothesis (H₁): There is significant impact of inventory cost on net profit

Findings:

All the stock levels are increasing year by year which means the company is maintaining the stocks properly.

EOQ is highest in the year 2018-19 and it indicates that the company is reducing the ordering of waste items which results in reducing the cost of wastage.

From hypothesis it is found that the profits of company are absolutely depending on the cost of inventory.

Suggestions:

It is suggested introducing the new trends like JIT for some slow moving materials will definitely show a positive impact on the costs and the variations in the average costs.

Damage control measures have to be taken up for proper management of inventory.

Conclusion:

Implementation of inventory management and control in Ultratech cement Ltd has reduced the average costs of inventories, which has lead to reduced carrying cost. Inventory has proved to be efficient and economic for raw materials. The company is stable with their turnover and shows a gradual increase over the time period.

YEAR	INVENTORY COST (in crore)	PROFIT (in crore)
2014-15	2,368.36	2,212.78
2015-16	2,615.41	2,174.65
2016-17	2,277.61	2,627.72
2017-18	2,224.99	2,231.28
2018-19	3,101.50	2,455.72

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
INVENTORY_COST	15.674	4	.000	2517.57400	2071.6133	2963.5347
PROFITS	26.889	4	.000	2340.43000	2098.7687	2582.0913

Interpretation:

The table value of t test at 5% level of significance and 4 as degrees of freedom are 2.77 where as calculated value is greater than that. So we are rejecting null hypothesis and accepting alternative hypothesis. In the sense there is significant effect of inventory cost on profits.

References:

- [1] I. m. pandey : financial management
- [2] Prasanna Chandra : financial management
- [3] Ks menon : purchasing and inventory control
- [4] Joseph g. Monks : operations management
- [5] S. N. Charry : production management
- [6] www.adityabirla.com
- [7] www.ultratechcementltd.com