

EFFECTIVE INVENTORY MANAGEMENT SYSTEM

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ABSTRACT: Capital generation is one of the major task of business. Capital is raised in an organization to manage the organizational needs and requirement. Therefore as per the requirement time period capital management is divided into two parts i.e. Fixed capital and working capital. Working capital needs for the inventory management. It is one the component of inventory management. There is the need of proper inventory management because if the cost of inventory management is increased, the production cost is also increases. Therefore, the current papers aims to study on the different system of management to save the production cost of the finished goods in manufacturing cost.

KEY WORDS: capital, inventory, cost, production, management, schemes, systems etc.

INTRODUCTION: The word inventory is originated from the British word 'Stock' or the American word 'Inventory.' For them this word stand for the goods which an organization has to hold for organization goals and achievement of the goals. In short inventory management is the management of stock, goods, semi-finished product or finished good. Most probably it is concern with the raw material that requires to prepare or manufacture the finished goods. Its tracks the good through entire operation or entire supply chain. Current paper studied on the various system used for the inventory management in an organization. There are five basic reasons of keeping inventory management which are given in below image number 1.1

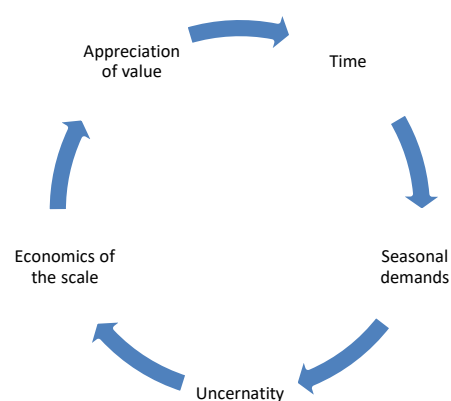


Image 1.1 Reasons of Inventory Management

As given in the above image, there are five major reasons to keep inventory management in a proper way in an organizations as:

Time: In the market, there works demand and supply ration. As per this ratio, there are many flexibilities in the market regarding to demand of the product. Hence timely manufacturing process of product is very essential which start right from placing the order of raw material to launching the product in the market.

Seasonal Demands: As said above demand and supply ratio is fluctuating in the flow. There are many product which are demanded by the consumers on seasonal basis such as cooler, Air-conditioner, are the demand of customers only in summer season. Inventory management of such product is not annual based. It is only seasonal base.

Uncertainty: Studies and survey has shown that there is always uncertainty of getting things done in time. When demand ratio increases, there is always chance of not getting the things in time. Hence emergency stock of inventory should be there in an organization.

Economics of the Scale: There is one important feature of market i.e. bulk purchasing saves money as comparative purchasing a single unit. To manage the economic scale of the company, bulk purchasing should be done for inventory management.

Appreciation on Value: In market, sometimes, there are chances to get proper or more value than the expectation, as per increasing demand of the goods. In such conditions, the principle of Appreciation on Value works as an important key of inventory management.

LITERATURE REVIEW

- a. **Hsieh (2002):** Hsieh has introduced two fuzzy production inventory model. It was known as 1. Fuzzy parameters for crisp production quantity and II. Fuzzy production quantity. The fuzzy arithmetical operations of Function Principle were proposed for the fuzzy total production inventory costs of these models.
- b. **(Lee, 1998):** By using Graded Mean Integration Representation method for de-fuzzifying fuzzy total production inventory cost and by using Extension of the Lagrangean method for solving inequality constrain problem, the authors found optimal solutions of these models Lee and Yao fuzzified the demand quantity and production quantity per day in their model
- c. **Lam and Wong (1996):** Lam and Wong efforts were known as one of the first attempts which was made by extending the existing model of Dolan.
- d. **Das, Roy and Maiti (2004):** This team has proposed a buyer-seller fuzzy inventory model which is to be for a deteriorating item, where deterioration is subject to discount

- e. **Ouyang et al. (2006):** This team has introduced defective items into the JELS model. The study applies various modelling methods to manage the defective rate in an integrated vendor-buyer inventory model.
- f. **Yang, (2007):**Yang presented a stylized model to find the optimal strategy for integrated vendor-buyer inventory model with fuzzy annual demand and fuzzy adjustable production rate.
- g. **Petrovic (1996):**Petrovic has formulated a conception of second level fuzzy set, methods of s-fuzzification and arithmetic defuzzification.
- h. **Ishii and Konno (1998):** They have introduced fuzziness of shortage cost explicitly into the classical newsboy problem.

AIMS AND OBJECTIVES OF THE STUDY

- a. To manage inventory with reducing the excessive cost of inventory management.
- b. To study various tracking methods of inventory management.
- c. To define the proper system of inventory management and maximize the profit of an organization.
- d. To help an organization to avoid the stock expiry.
- e. To keep goods properly and effectively.

METHODOLOGY

The current study is survey based study in five leather industries were selected as a sample size. They were promised that their name will not be exposed anywhere in the research writing. Therefore Company A, B, C, D &E were mentioned in further writing. The questionnaires are prepared based on various techniques and inventory management schemes of these industries. Analysed data is present with the graphical representation in the result analysis point.

LIMITATION OF THE STUDY: As current study is limited with Vellore district of TamilNadu, State of India, and only five leather Manufacturing industries are selected, so no data out of these five manufacturing industries were selected for the study.

Scope of The Study: The study will help to organization for the selection of proper inventory management to minimize the manufacturing cost of the product.

SOURCES OF DATA COLLECTION

Following two types of source is used for the data collection of current study.

- a. **Primary Source:** For the current study is the survey based study. Data is collected from the five selected leather manufacturing industries located in Vellore district of Tamil Nadu.
- b. **Secondary Source:** Secondary source for current study is used from the books, journal, articles, thesis –both published and unpublished, available material on current study in printed form,

even available on internet. The data for the study has been collected from secondary sources like newspapers, research papers and websites.

DATA COLLECTION METHOD

The data is collected from the randomly selected five leather Industries located in Vellore District of Tamil Nadu with defining the following parameters for the study. The name to selected Industries are given in the Study as A,B,C,D &E; as researcher promised them to keep secret of their name to maintain the privacy of organizations:

Sr no.	Techniques used for Inventory	Specification of Techniques
01	ABC	Always Better control Analysis
02	JIT	Just-in-Time
03	MRP	Material Requirement Planning
04	EOQ	Economic Order Quantity Method
05	MSS	Minimum Safety Stock

Table 1.1 The Inventory Techniques used for the Study

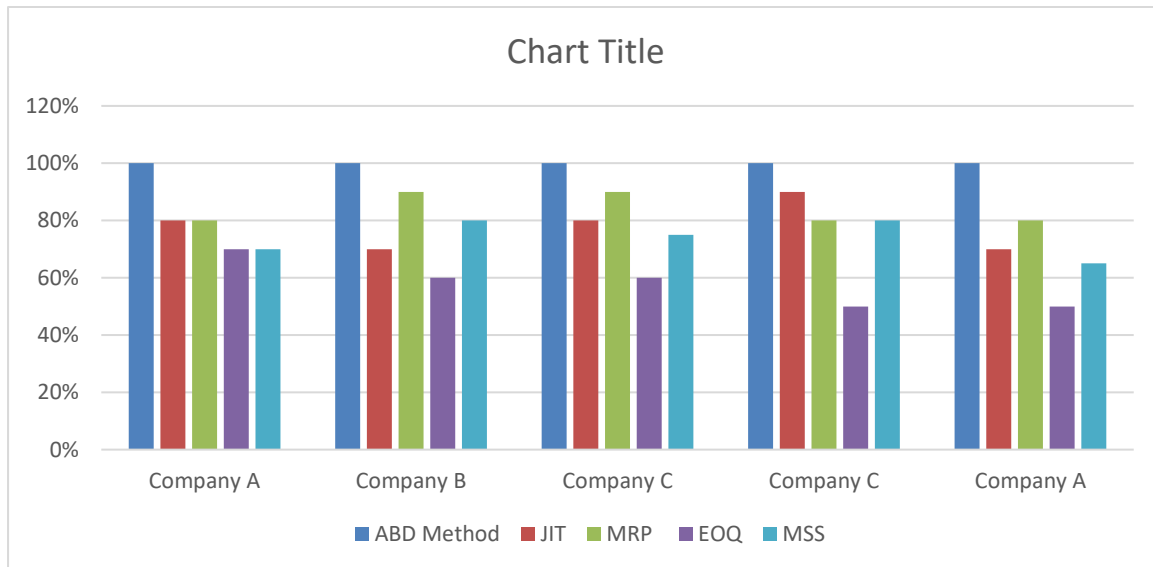
As shown in the table 1.1, five major techniques used for inventory management in India are selected for the current study as Always Better control Analysis (ABC),Just-in-Time (JIT),Material Requirement Planning (MRP),Economic Order Quantity Method (EOQ) and Minimum Safety Stock (MSS).

THE RESULT OF THE STUDY

The result of the study is first given in the below table as an analysed data based on the data collected of five selected leather manufacturing industries located in Vellore district of Tamil Nadu:

Sr no.	ABD Method	JIT	MRP	EOQ	MSS
Company A	100%	80%	80%	70%	70%
Company B	100%	70%	90%	60%	80%
Company C	100%	80%	90%	60%	75%
Company C	100%	90%	80%	50%	80%
Company A	100%	70%	80%	50%	65%

Table 1.2 Result of the study



Graph number 1.1 Result of the Study

As shown in the graph number 1.1 and table number 1.2, all the leather industries of Vellore are given priority to ABC inventory management methods/system. This is the traditional and best method of Inventory Management in India. The lowest priority, they are giving to EOQ inventory management because to them, bulk purchasing will not work as a remedial tools every time. Finding of the study are given below:

- I. ABC is the Best Inventory Management System: The current study has shown that ABC is the best inventory management system and maximum industries are using this method.
- II. ABC inventory Management Helps to Manage the Working Capital: Raising Capital is one of the major Challenge in Indian industries as India is under developing Nation. ABC inventory management helps to manage the inventory with proper planning of working capital. Hence, it is used on priority.
- III. ABC management system has proved that Old is Gold. As it is the oldest one and used by all manufacturing industries on priority.
- IV. Just-in-time, Material Requirement Planning and Minimum Safety Stock, these three are used more than Economic Order Quantity because the respondent viewed that there are more chances of getting damaged or bad quality of goods if they are purchased in bulk.

SUGGESTION

- a. Further study is essential to get more knowledge of different new modern techniques of the inventory management.

- b. To use the other techniques of Inventory management apart from above five general techniques of management, the technical knowledge of using the availed software's in market is essential.
- c. There is necessity of proper marketing of ERP and other software's of inventory management because they are useful to keep record of purchasing.

CONCLUSION

Thus, the study has shown that there are several methods of inventory management. Not only single method is useful for inventory management. It needs combination of inventory management systems. Now-a-days the need of technical era, the inventory management softwares also need to be used for the inventory management. Studies have proved that 75/100 working capital is invested on the inventory management. Hence, it is the important task of material management to be careful about inventory management. The cost plus quality of the product both are defined on the process of Inventory management.

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