INTERNSHIP REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE

BACHELOR OF BUSINESS ADMINISTRATION OF TUMAKURU UNIVERSITY

INTERNSHIP REPORT

ON

INVENTORY MANAGEMENT IN RETAIL INDUSTRIES (A CASE STUDY OF VISHAL MEGA MART TUMKUR)

SUBMITTED BY

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UNDER THE GUIDANCE OF

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PLACE: Tumkur

DATE:

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CHAPTER 1

COMPANY - PROFILE

ABOUT THE ORGANIZATION

Vishal is one of fastest growing retailing groups in India. Its outlets cater to almost all price ranges. The showrooms have over 7000 products range which fulfills all your household needs, and can be catered to under one roof. It is covering about 1282000 sq. ft. in 18 state across India. Each store gives you international quality goods and prices hard to match. The cost benefits that are derived from the large central purchase of goods and services are passed on to the consumer.

VISHAL HISTORY AND ACHIEVEMENTS

What started as a humble one store enterprise in 1986 in **Kolkata**(Erstwhile, Calcutta) is today a conglomerate encompassing **51** showrooms in 39 cities. India's first hyper-market has also been opened for the Indian consumer by Vishal. Situated in the national capital Delhi this store boasts of the single largest collection of goods and commodities sold under one roof in India.

The group had a turnover of **Rs. 1463.12** million for fiscal 2005, under the dynamic leadership of **Mr. Ram Chandra Aggarwal** . The group had of turnover is 2884.43 million for fiscal 2006 and **Rs. 6026.53** million for fiscal 2007.

The group's prime focus is on retailing. The **Vishal** stores offer affordable family fashion at prices to suit every pocket. The group's philosophy is integration and towards this end has initiated backward integration in the field of high fashion by setting up a state of the art manufacturing facility to support its retail endeavors.

CORPORATE PROFILE

Vishal Retail Ltd. has main factory in Gurgaon, Haryana. This factory has more than 700 imported machines that have a capacity to manufacturer 150000 pieces a month. The factory occupies 80000 sq ft of covered space. The Vishal group indirectly gives employment to more than a 1000 people. These people work in ancillaries that supply finished goods to the company.

Our 10 warehouses cater to **51** showrooms in **39** cities. It is covering about 1282000 sq. ft. in 18 state across India. Our loyalty programme gives the Indian consumer of being rewarded every time he makes a purchase at any of our stores anywhere in the country. Consumers can make purchases at any store and accumulate points at a central level. These points are redeemable at any of our stores. You can accumulate points even when you make a purchase while traveling and redeem points at any store. So no matter where you are in India you can partake in our loyalty programme.


Manufacturing
to
Retailing

Our dedicated professional Quality Control team ensures the quality of our products. Our quality checks start the basic cloth and accessories and end with our doing a full inspection on the finished items. We believe that Quality Control is the key to success. Our goal is to give the customer with the best quality and value for his money.

VISHAL MEGA MART'S OBJECTIVIES

QUALITY POLICY STATEMENT

"We will deliver defect - free products, services and solutions to meet the requirements of our external and internal customers the first time every time."

MISSION STATEMENT

We share the vision and belief that our customers and stakeholders shall be served only by creating and executing future scenarios in the consumption space

leading to economic development.

We will be the trendsetters in evolving delivery formats, creating retail realty, making consumption affordable for all customer segments – for classes and for masses.

We shall infuse Indian brands with confidence and renewed ambition. We shall be efficient, cost- conscious and committed to quality in whatever we do.

We shall ensure that our positive attitude, sincerity, humility and united determination shall be the driving force to make us successful.

VISION STATEMENT

Future Group shall deliver Everything, Everywhere, Everytime for Every Indian Consumer in the most profitable manner.

Core Values

Indianness: confidence in ourselves.

Leadership: to be a leader, both in thought and business.

Respect & Humility: to respect every individual and be humble in our conduct.

Introspection: leading to purposeful thinking.

Openness: to be open and receptive to new ideas, knowledge and information.

Valuing and Nurturing Relationships: to build long term relationships.

Simplicity & Positivity: Simplicity and positivity in our thought, business and action.

Adaptability: to be flexible and adaptable, to meet challenges.

Flow: to respect and understand the universal laws of nature.

OUR MANAGEMENT OBJECTIVE

To fuel initiative and foster activity by allowing individuals freedom and action and innovation in attaining defined objectives.

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PRODUCTS

Our Products

Our Products Categories

HOME FURNISHING

Drawing Room **Bedroom**

Door Mat Bed Sheet

Carpet Pillows

Curtains Pillow Cover

Kitchen **Bathroom**

Apron Bath Mats

Kitchen Napkin Towel Gift Sets

FOOD MART

FOOD & BEVERAGES

Snacks

Drinks

- SPORTS & FITNESS

INDOOR GAMES **OUTDOOR GAMES**

Basket Ball Cricket Bat

T.T. Bat Football

Boxing Kit Lawn Tennis

Swimming Costumes Tennis Racket

Water Ball Tennis Ball

Fitness Equip.

Personal Gym

- FOOTWEAR

BOYS **GIRLS**

Shoes Slippers

Sandals Sandals

LADIES **MENS**

Shoes Shoes

Slippers Slippers

more...

- TELEMART

Communication	**Mobile Accessories**
Mobile	Mobile Batteries
	Mobile Charger
	Mobile Dori

MENS

Upper	**Lower**
Shirt Casual	Jeans(MP)
Shirt Formal	Cotton Trouser(MPC)
Ethnic & Sports	**Winter Wear**
Night Suits	Suit(WMC)
T-Shirts	Blazer(WMB)
Dupatta	Windcheater(WMW)
Sherwani	Jacket

more...

LADIES ACCESSORIES

Upper	**Lower**
Kurta	Pants Jeans
Skirt Top	Capri
Ethnic	**Winter Wear**
Nighty	Jackets
Lancha	Stawl
Sharara	Blazer
Salwar Suit	Track Suit

more...

INFANTS

Garments	**Accessories**
Hot Pant	Bed Sheet
Frock	Under Garments

Baba Suit Socks

Winter Wear

Sweater

Pull Over

more...

WOMEN

Sarees	**Personal Items**
Fancy(SRF)	Cap(LCA)
Synthetics	Socks(Las)
Banarsi	

Jewellery	**Cosmetics**
Necklace	Lip Gloss
Ring	Nail Polish

more...

KIDS BOYS

Lower	**Sets**	**Winter Wear**
Jeans	Night Suit	Suit

Bermudas Baba Suit Blazer

Dungries Jacket

Upper Ethnic

Shirt Formal Kurta- Pyjama

T-Shirt Sherwani

more...

KIDS GIRLS

Lower Sets Winter Wear

Hot Pant Night Suit Hipster Set

Upper Ethnic

Tops(GWT) Sharara

Frock(GFK) Lancha

more...

TRAVEL ACCESSORIES

Luggages Portfolio Bags

Suitcase Shoulder Bags

Executive Bag

School Bags

Pouch & Cases

Waist Pouch

Vanity Cases

HOUSEHOLD

AcrylicWare **Copper** **Steel**

Dinner Set Jug Cake Server

Home Aids **Pressure Cooker** **Non Stick**

Floor Wiper Cooker Handi

Sanitary Brush Pressure Pan Dosa Tawa

General Plastic **Electrical App.** **Bone China**

Goods

Coffee Mug Chopper Soup Set

Bucket Microwave Oven Dessert Set

Glass Ware **Thermo Ware** **Porcelain**

Cup Tiffin Cup & Saucer

Lemon Set Container

LIFESTYLE

Time Zone **Opticals** **Gifts & Novelties**

Ladies Wrist Watch Ladies Sun Glass Flower Vase

Mens Wrist Watch Mens Sun Glass Key Chain

Mens Accessories Electric Perfume/Deo

& Electronics Items

Belts Battery(ABT) Spray

Wallets Calculator(EEC) Deo

more...

TOYS & GAMES

Soft Toys Dolls Cycles & Scooters

Musical Toys Barbie Doll Cycles

Non-Musical Other Dolls Scooters

Board Games Infant Toys Video Games

Wooden Blocks Teether T.V. Video Game

Puzzles Swing Hand Video Game

more...

STATIONARY

School Office Paper Mart

Exam Board Office File Diary

Clay Punching Machine File

Party Stuff

Balloons

Ribbons

Our Products

- ***GARMENTS***

MEN

WOMEN


BOYS



GIRLS

INFANTS

Home Furnishing

Bath Furnishing

Bed Room Furnishing

Covers

Drawing Room Furnishing

Kitchen Furnishing

FOODMART

Chinese & Indian Food

Food & Beverages

HOUSE HOLD

Appliances

Cleaning Aids

Gifts & Novelties

Plastic Aids

Thermo Ware

Kitchen Aids

INRTODUCTION

(About inventory management)

In our daily life, we observe that a small retailer know roughly the demand of his customers in a month or a week, and accordingly places orders on the wholesaler to meet the demand of his customers. But, this is not the case with a manager of a big departmental store or a big retailer, because the stocking in such cases depends upon various factors, e.g. demand, time of ordering, lag between orders and actual receipts, etc. so the real problem is to have a compromise between over-stocking and under-stocking.

The study of such type of problems is know by the term ‘Material Management’ or ‘inventory Control’. The inventory control may be defined as follows.

Defintion. The function of directing the movement of goods through the entire manufacturing cycle from the requisitioning of raw materials to the inventory of finished goods orderly mannered to meet the object tives of maximum customer-service with minimum investment and efficient (low-cost) plant operation.

The models here limited mainly to the elementary type, because the analytical study of the other cases be-comes more difficult. After a general discussion of each indicated type of model, we shall give many interesting solved examples so that all the neccssary ideas may be clear to the students. We shall also discuss another class of

inventory models, namely 'Inventory Models with price Breaks' (i.e. Quantity Discount Models).

2.1. WHAT IS INVENTORY ?

In broad sense, inventory may be defined as the stock of goods, commodities or other cconomic resources that are stored or reserved in order to cnsure smooth and efficient running of businccss affairs.

The inventory or stock of goods may be kept in any of the following foms:

(i) **Raw material inventory**, i.e. raw materials which are kept in stock for using in the production of goods.

(ii) **Work-in-process inventory**, i.e. scmifinished goods or goods in process which are stored during the production process.

(iii) **Finished goods inventory**, i.e. finished good awaiting shipment from the factory.

(iv) **Inventory also include** : furniture, machinery, fixtures, etc. The term inventory may be classified in two main categories.

1. Direct Inventories :

The items which play a direct role in the manufacture and become an integral part of finished goods are included in the category of direct inventories. Those may be further classified into four main groups:

(a) Raw material inventories are provided

(i) for economical bulk purchasing

(ii) to enable production rate changes

(iii) to provide production buffer against delays in transportation

(iv) for seasonal fluctuations.

(b) Work-in-process inventories are provided

(i) to enable economical lot production

(ii) to cater to the variety of products

(iii) for replacement of wastages

(iv) to maintain uniform production even if amount of sales may vary.

(c) Finished-goods inventories are provided

(i) for maintaining off-self delivery

(ii) to allow stabilization of the production level

(iii) for sales promotion.

(d) Spare parts.

2. Indirect Inventories :

Indirect inventories include those items which are nccessarily required for manufacturing but do not become the component of finished production, like : oil, grease, lubricants, petrol, office-material, main-tenance material, etc.

2.3 TYPES OF INVENTORY

Basically, there are five type of inventory :

I. **Fluctuation Inventories.** These have to be carried because sales and production times cannot be predicted accurately. In real-life problems, three are fluctuations in the demand and lead-times that affect the production of items. Such type of reserve stocks or safety stocks are called fluctuation inventories.

II. **Anticipation Inventories.** These are built up in advance for the scason of targe of large sales, a promotion programme or a plant shut-down period. In fact, anticipation store the men and machine hours for future requirements.

III. **Cycle (lot-size) Inventories.** In practical situations it seldom happens that the rate of consumption is the same as the rate of production or purchasing. So the items are procured in langer quantities than they are required. They results in cycle (or lot-size) inventories.

IV. **Transportation Inventories.** Such inventories exist because the materials are required to move from one place t another. When the transportation time is long, the items under transport cannot be served to customers. These inventories exist solely because of transportation time.

V. **Decoupling Inventories.** Such inventories are needed for meeting out the demands during the decoupling period of manufacturing or purchasing.

2.4. INVENTORY DECISIONS

The managers must take two basic decisions in order to accomplish the functions of inventory. The decisions made for every item in the inventory are:

(i) How much amount of an item should be ordered when the inventory of that item is to be replenished ?

(ii) When to replenish the inventory of that item ?

2.5. HOW TO DEVELOP AN INVENTORY MODEL?

As explained earlier, inventory models are concerned with two main decisions: how mush to order at a time and when to order so as to minimise the total cost ? The sequence of basic steps required for developing an inventory model may be organised as follows :

Step 1. First take the physical stock of all the inventory items in an organization.

Step 2. Then, classify the stock of items into various categories. Although several methods are available to classify the inventories; but the selected method must serve the objectives of inventory management. For example, inventory items may be classified as raw mterials, work-in process, purchased components, consumable stores and maintenance spares, and finished goods, etc.

Step 3. Each of above classifications may be further divided intoseveral groups. For example, consumable stores and main tenance spares can be further divided into the following groups:

Step 4. after classification of inventories, each item should be assigned a suitable code. Coding system should be flexible so that new items may also be permitted for inclusion.

Step 5. Since the number of items in an organization is very large, separate inventory management model should be developed for each category of items.

Step 6. Use A-B-C or V-E-D classification (as discussed in the next chapter) which provide a basis for a selective control of inventories through formulation of suitable inventory policies for each category.

Step 7. Now decide about the inventory model to be developed. For example, fixed-order-quantity system may be developed for 'A' class and high valued 'B' class items, whereas periodic review system may be developed for low valued 'B' class and 'C' class itmes.

Step 8. For this, collect date relevant to determine ordering cost, shortage cost, inventory carrying cost. Etc.

Step 9. Then, make an estimate of annual demand for each inventory item and their prevailing market price.

Step 10. Estimate lead-time, safety stock and reorder level, if supply is not instantaneous. Also, decide about the service-level to be provided to the customers.

Step 11. Now develop the inventory model.

Step 12. Finally, review the position and make suitable alterations, if required, due to current situations or constrains.

Before we procced to discuss inventory mokels, it is very desirable to consider briefly the costs involved in the inventory decisions.

1. **Holding Cost (C_1).** The cost associated with carrying or holding the goods in stock is known as holding or carrying or holding the goods in stock is known as holding or carrying cost which is usually denoted by C1 per unit of goods for a unit of time. Holding cost is assumed to vary directly with the size of inventory as well as the time the item is held in stock. The following components constitute the holding cost :

(i) invested Capital Cost. This is the interest change over the capital investment. Since this is the most important component, a careful investigation is required to dctermine its rate.

(ii) Record-keeping and administrative. Cost th signifies the need of keeping funds of maintaining the records and necessary administration.

(iii) Handling Costs. These. Include all costs associated with mve-ment of stock, such, such as cost of labour, over head cranes, gantries and other machinery required for this purpose.

(iv) Storage Costs. These involve the rent to storage space or depreciation and interest even if the own space is used.

(v) Storage Costs. These involve the rent of storage space or depreciation and interest even if the own space is used.

(vi) Taxes and Insurance Costs. All these costs require careful study and generally amounts to 1% to 2% of the invested capital.

(vii) Purchase price or Production Costs. Purchased price per unit item is affected by the quantity purchased due to quantity discounts orprice-breaks. Production cost per unit item depends upon the length of production runs. For long smouth production runs this cost is lower duc to more efficiency of men and machines. So the order quantity must be suitably modified to take the advantage of these price discounts.

If p is the purchase price of an item and I is the stock holding cost per unit time expressed as a fraction of stock value (in rupees), then the holding cost C1 = IP.

(viii) Salvage Costs or Seling Price. When the demand for an item is affected by its quantity in stock, the decision model of the problem depends upon the profit maximization criterion and includes the revenue (sales tax & etc.) from the sale of the item. Generally, salvage costs are combined with the storage costs and not considered independently.

2. **Shortage Costs or Stock-out Costs (C2).** The penalty costs that are in incurred as a result of running out of stock (i.e., shortage) are known as shortage or stock-out costs. These are denoted by C2 per unit of goods for a specified period.

These costs arise due to shortage of goods, sales may be lost, good will may be lost either by a delay in meeting the demand or being quite unable to meet the demand at all. In the case where the unfilled demand for the goods can be satisfied at a latter date (backlog case), these costs are usually assumed to vary directly with the shortage quantity and the delaying time both. on the other hand, if the unfilled demand s lost (no backlog case), shortage costs become proportional to shortage quantity only.

3. **Set-up Costs (C3).** These include the fixed cost associated with obtaining goods through placing of an order or purchasing or manufacturing or setting up a machinery before starting production. So they include costs of purchase, requisition, follow-up, receiving the goods, quality control, etc. these are also called order costs or replenishment costs, usually denoted by C3 per production run (cycle). They are assumed to be independent of the quantity ordered or produced.

2.6. WHY INVENTORY IS MAINTAINED ?

As we aware of the fact that the inventory is maintained for efficient and smooth running of business affairs. If a manufacturer has no stock of goods at all, on receiving a sale-order he has to place an order for purchasse of raw materials, wait for their receipt and then start his production; thus, the customers will have to wait for a long time for the delivery of the goods and may turn to other suppliers. This results in a heavy loss of business. So it becomes necessary to maintain an inventory because of the following reasons :

3.1. Inventory helps in smooth and efficient running of business.

3.2. Inventory provides service to the customers immediately or at a short notice.

3.3. Due to absence of stock, the company may have to pay high prices because of picce-wise purchasing. Maintaining of inventory may earn proce discount because of bulk-purchasing.

3.4. Inventory also acts as a buffer stock when raw materials are received late and so many sale-orders are likely to be rjected.

3.5. Inventory also reduces product costs because there is an additional advantage of batching and long smooth running production runs.

3.6. Inventory helps in maintaining the economy by absorbing some of the fluctuations when the demand for an item fluctuates or is seasonal.

3.7. Pipeline stocks (also called process and movement inventories) are also necessary where the significant amount of time is consumed in the trans-shipment of items from one location to another.

Mathematically, the problem of maintaining the inventory arises due to the fact that – if a person (e.g., a big retailer) decides to have a large stock, his holding cost C1 increases but his shortage cost C2 and set-up cost C3 decrease. On the other hand, if he has small stock, his holding cost C1 decreases but shortage cost C2 and set-up cost C3 increase. Similarly, if he decides to order very frequently, his ordering cost increases while other costs may decrease. So it becomes necessary to have a compromise between over-stocking and under-stocking by making optimum (most favourable) decisions by controlling the value of some variables which are at our desposal.

2.7. VARIABLES IN INVENTORY PROBLEM

We shall now proceed to classify the variables which are involved in an inventory problem.

The variables used in any inventory model are of two types :

(a) Controlled variables,

(b) Uncontrolled variables.

Controlled Variables :

The following are variables that may be controlled separately or in combination:

1) How much quantity acquired (by purchase, production, or some other means).

This may be adjusted for each type of resources separately or for all items collectively in one of the following ways :

(i) The quantity to be ordered should be q quantity units;

(ii) The quantity to be ordered should be such as to raise the stock level to S quantity units;

(iii) The quantity to be ordered should be such as to raise the stock level on hand and on order to z.

2. The frequency or timing of acquisition. How often or when to replenish the inventory ?

The inventory should be replenished when –

(i) The amount in stock is equal to or below S quantity units;

Or (ii) The amount in stock and the amount of order are equal to or below z;

Or (iii) at every t time units.

3. The completion stage of stocked items.

More finished the goods, lesser the delay in meeting the demands. But, on the other hand higher will be the cost of holding them in stock. Lesser finished the stock items, longer the time in meeting the demands, consequently lesser the cost of holding in stock.

Most of the inventory models involve only first two types of control- led variables.

Uncontrolled Variables :

The following are the principal variables the may not be controlled.

(1) The holding costs (C1), shortage or penalty costly (C2), set-up costs (C3).

(2) Demand (the number of items required per period).

We note that it is not necessarily the amount sold, because some demand may go unfilled because of shortages or delays. It is, in fct, the demand that would be sold if all that is required were available. The demand pattern of items may be either deterministic or probabilistic.

In the deterministic case, it is assumed that the quantities needed ovedr subsequent periods of time are known exactly. Further, the known demand may be fixed or variable with time. Such demands are called static and dynamic repectively.

The probabilistic demand occurs when the demand over a certain period of time is not know with certainty; but its pattern can be described by a known probability distribution. A probabilistic demand may be either stationary or non-stationary over time.

3. Lead time [the time between placing on order and its arrival in stock]. If the lead time is known and is not equal to zero, and if demand is deterministic, all that one requires to do is to order in advance by an amount of time equal to the lead time. While there is no need to order in advance, if the lead time is zero.

If, however, the lead time is a variable that is known only prob –abilistically, the question of when to order is more difficult one. If either the demand or the lead time is known only probabistically, the amount and the timing of replenishment is found by considering expected costs of holding and shortage over the lead time required.

4. Amount delivered (supply of goods).

The supply of goods may be instantaneous or spread over a period of time. If a quanitity q is ordered for purchase or production, the amount delivered may vary around q with a know probability density function.

CHAPTER 2

Objective of the study

- To know and examine the various inventory control techniques followed by Vishal mega mart.
- To determine how effective is the inventory management system of vishal mega mart in optimizing the inventory costs and managing efficiently their replenishment system.

Scope of the study

The study will be helpful in knowing the present system of inventory management followed in Vishal mega mart and it will help in exploring and how they can manage their inventory more effectively and smoothen their replenishment system.

CHAPTER 3

RESEARCH METHODOLOGY FOR REPORT

Type of research:

The type of research conducted is Conclusive-Descriptive research design.

Type of data:

1) **Primary data**:is collected by personal interviewing the concerned authority(Store manager Vishal Megamart).

2) **Secondary data**: reports and website of the organization.

   - **Research tool**: personal interview with store manager of Vishal Megamart.

     On the basis of interview the appropriate interpretations are made .

CHAPTER 4

(ANALYSIS & INTERPRETATION)

Q.1)Does your organization follow any scientific inventory management technique?

a)Yes **b)No**

Ans.Yes

INTERPRETATION:

They follow scientific techniquies for inventory management in Vishal Mega Mart,Bareilly.

Q.2)What inventory management methods do you follow?

a)EOQ (Economic order quantity)

b)Selective inventory control techniques

1. **ABC**
2. **FSN**
3. **XYZ**
4. **VED**
5. **HTML**

Ans.

INTERPRETATION:

In Vishal Megamart for optimizing the inventory cost the quantitative techniques such as EOQ is followed and some selective inventory control techniquies like ABC Analysis & FSN are used for keeping goods according to their value and consumption rate.

Q.3)On what basis the method is selected for managing inventory?
a)Universal b)Product category wise

Ans.Product category wise

INTERPRETATION:
According to the product categories they applied various techniques such as ABC & FSN.As there are number of product categories in vishal megamart like HOME FURNISHING ITEMS,SPORTS &FITNESS EQUIPMENTS,FOOTWEAR,MOBILE PHONES,TRAVEL ACCESSORIES,STATIONARY,GARMENTS etc.

Q.4)Which type of ordering system is followed?
a)Periodic ordering system b)Fixed quantity ordering system.

Ans.Periodic ordering system

INTERPRETATION:
In Vishal Megamart Periodic Ordering system is used in which ordering time is fixed but order quantity are not fixed.As in Vishl Mega Mart they sent their orders every week as per the requirements.
.

Q.5)Do you use any technology or software for managing inventory?If yes,Please mention……

……

Ans.Yes,SAP Software and RFID Chips

INTERPRETATION:

The chain of superstores, Vishal Mega Mart, has selected SAP to improve its business processes and create a strong and adaptive environment for business growth and profitability. This state-of-the-art system will enhance critical processes including global sourcing, distribution, logistics, product innovation, inventory visibility, financial transparency, compliance and point-of-sales data management.

Q.6)How much percentage of inventory cost is reduced by following these techniquies?

a)10% -20%
b)20%-30%
c)30%-50%

Ans.20%-30%

INTERPRETATION:
The store manager said that by using various inventory control techniques they able to reduce total inventory cost by 20%-30%.

INVENTORY MANAGEMENT TECHNIQUIES USED IN VISHAL MEGAMART BAREILLY

On account of my personal interview with store manager, it is found that the vishal mega mart in Bareilly followed the following techniquies for managing the inventory.

2. PERIODIC ORDERING SYSTEM

The ordering system used is 'P' system also known as Periodic Review system or fixed Interval system. In this system the size of order quanitity may vary with fluctuation in demand but the ordering interval is fixed.

It is based on periodic reordering of all items. With every cycle the stock of each item is brought up to its level, which is dependent on the cycle, the replenishment period, and the consumption rate. When the replenishment period and demand rate do not change, the reorder quantity obviously increases with the cycle time, so that short cycles are required if rapid turnover of stock is desirable

Advantages over Two Bin System

- All orders for replenishment are issued at the same time.
- Ordering mechanism is requlat and not subject to sporadic arrivals of warning signals from the store.

Disadvantages:

- Usually more stock is held when this system is adopted than with the 2-bin system. Following variations of ordering cycle system are possible.

(i) All items one cycle

- All the items are replenished in every cycle. This is useful when the number of items is not too large, and differences in demand are not very significant.
- However, in this system the average stock level tends to increase with the number of items.

(ii) Multicycles

- The items are divided into groups and each group has its own ordering cycle, independent of the other groups. The groups are formed either by selecting goods that to be ordered from the same vendor or by taking items with similar demand characteristics.
- The system is adopted when the stores have to deal with a large number of items.

In case of some daily needs items mostly those which are edible and perishable like vegetable oils, spices, milk, butter, etc. they make local purchases from nearby markets like shyamgang, kutubkhana mandi, etc.

TYPES OF INVENTORY CONTROL TECHNIQUES

Inventory can be controlled by these two techniques: (a) Qualitative techniques, (b) Quantitative techniques.

In vishal megamart Bareilly Qualitative aspect of inventory is considered.

QUALITATIVE TECHNIQUES

They consist of selective control methods bases on Pareto 80-20 principle, which states that there are a critical few and trivial many. According to this all the items all the items of an industry are classified into some broad groups on certain basis and the attention is paid to their control accordingly. It is not practical to monitor inexpensive items with the same intensity of care as very expensive items. Some of the popular classifications selective control techniques are as follows:

- ABC classification
- FSN classification

ABC classification

ABC stands for ‘always better control’. The items on hand are classified into A,B,C and types on the basis of the value in terms of capital or annual Rupees usage (i.e., Rupees value per unit multiplied by annual usage rate), and then allocates control efforts accordingly. Thus, the items with high value and low volume are kept in A-type, items with low value and high volume are kept in C-type, and the items with moderate value and moderate volumes belong to the B-type gets the moderate attention. Typically, three classes of items are called: A (very important), B (moderately important), and C (least important).

The actual number of categories varies from organization to organization, depending on the extent to which a firm wants to differentiate the control efforts. With three classes of items, A items generally account for about 15 to 20 percent of the number of items in inventory but about 60 to 70 percent of the Rupees usage. At the other end of the scale, C items might account for about 60 percent of the number of items but only about 10 percent of the Rupees usage of an inventory.

A type items should receive close attention through frequent reviews of amounts on hand and control over withdrawals to make sure that customer service levels are attained. The C type items should receive lesser control (e.g. two-bin systems, bulk orders), and the B type items should have controls that lie between the two extremes.

FSN Classification

In this method, the items are classified according to the rate of consumption. Thus, the materials can be fast (F), show (S) and non-moving types (N). F-type materials get the maximum attention, and the N- type the minimum for their control and procurement. This concept is also applying in Vishal mega mart retail store. Let the different items in Vishal megamart are: mobile phones, cosmetics,footwears,jewellery,suitcase,ladies wrist watch,toys,household appliances, shaving blades, Rice, pulse, salt, sugar, tea wound plasters, and dry-fruits.

According to FSN, they can be classified as

F = Rice, pulse, salt, sugar, tea and some other daily needs items are consumed almost daily at relatively faster rate and they need more attention to avoid stock-out situation in the store specially if some unexpected demands of customers**.**

S = suitcase,ladies wrist watch,toys,household appliances,Mobile phones , are consumed at a moderate speed and need moderate attention.

N =,jewellery,and some costlier items are consumed at a very negligible rate and need attention. They can be bought and can be consumed leisurely when need arises.

The same concept can be extended to industrial or war situation. For example, the bullets are fast moving items but a nuclear bomb is almost a non-moving item. In fact it may never be used but it consumes lot of revenue. Such items are sometimes called insurance items as they ensure a kind of deterred and may prevent a war between two nations just by their presence.

TRANSPORTATION SYSTEM IN VISHAL MEGAMART

They have their own logistics and transport facilities for carrying the goods into and out of the store. Those items which are remain Unsold are sent back to the central distribution centre or head office.

STORE MANAGEMENT

It is concerned with carrying the right kind of material in right quantity (neither in excess nor in short supply), providing it quickly as when require, keeping it safe against any kind of deterioration, pilferage and to carryout the efficient performance of all these functions at lowest possible cost.

In Vishal Mega mart Bareilly, there is a single distribution centre/store/warehouse which is located at second floor. It has a store manager. The various functions which are performed by the store manager are as follows.

STORE FUNCTIONS

1) Receipt

Store receives from both outside and internal divisions also. The outside receipts system starts with the placement of order by various departments, a copy of which is sent to the stores which is maintained in chronological order.

Further the head office while dispatching the goods normally send an 'advice note' to the stores which contains the information regarding the date of dispatch, transport details, description of the consignment and value of the consignment.

Another document known as 'consignment note' is prepared by transport carrier and is sent to store concerns.

On actual delivery the receiving department unpacks the goods and tallys it with the previous document. There is a inside each package packing slip detailing the contents in the package.

2) Storage System

The identification or codification of the items can be done in the following ways.

a) Arbitrary approach

b) Symbolic approach

c) Use of engineering drawing numbers

Storage system

a) physical system / location

b) closed store system

c) open store system

d) random access store system

3) Record system

All recording of items in SAP that is computerized system which records all items which comes in distribution centre from head office.

4) Issue system

The distribution centre in Vishal Mega mart issues goods to the respective floors as per the requirement of each floor.

Accounting for materials

I. FIFO Method

II. LIFO Method

III. Average cost Method

IV. Replacement price Method/Market price Method

V. Standard Price Method

VI. Actual Price Method

VII. Inflated price Method

5) Physical Verification of Materials

Some time the book balance and physical quantity does not tally. The important reasons for such discrepancy are.

i. Wrong recording in the SAP

ii. Placement of the material in wrong bin.

iii. Mixing in adjacent container

iv. Losses due to pilferage and damage etc.

There are two popular Methods of stock verification.

1) Periodic Inventory Verification
2) Perpetual Inventory verification

Technologies used for managing inventory in VISHAL MEGAMART BAREILLY

1. Vishal Mega Mart selects SAP solution

The chain of superstores, Vishal Mega Mart, has selected SAP to improve its business processes and create a strong and adaptive environment for business growth and profitability. This state-of-the-art system will enhance critical processes including global sourcing, distribution, logistics, product innovation, inventory visibility, financial transparency, compliance and point-of-sales data management.

2. RFID

Although many companies are now using sophisticated Warehouse Management Systems integrated with Supply Chain Systems, Enterprise Systems, and Electronic Data Interchange (EDI), the movement and tracking of goods through the manufacturing and supply chain process is still a complex procedure which is difficult to manage. In many instances, the goods being distributed to the retailer must go through one or more third party distribution processes, before they reach their final destination.

Currently, most material tracking systems employ two-dimensional barcodes that must be close to and within the "line of sight" of the barcode reader. This requires

manual scanning or a conveyor-like process to position the barcode and scanner. Barcodes can run the risk of getting wet or scratched due to mishandling or a harsh environment, which often prevents accurate reading by the scanner. Manual intervention is labor intensive, costly, and error-prone. In addition, scheduled scanning or manual methods cannot ensure the inventory remains up-to-date, due to oversights, errors, and internal shrinkage.

With ActiveWave's RFID solution, inventory can be updated in real time without product movement, scanning or human involvement. Our fully automated system allows inventory status to be determined, and shipping & receiving documents to be generated automatically. The system could also trigger automatic orders for products that are low in inventory.

Benefits of using ActiveWave RFID Systems:

- Provides total asset visibility
- Gives full inventory history
- Allows reduced inventory-stocking levels
- Facilitates "Just-in-Time" deliveries
- Provides full process control for products in the facility
- Reduces lead-time
- Shortens cross docking time

- Speeds up sort/pick rate
- Reduces shelf space
- Provides higher-level security
- Reduces errors
- Reduces overall cost of operations

Inventory control system

An **inventory control system** is an integrated package of software and hardware used in warehouse operations, and elsewhere, to monitor the quantity, location and status of inventory as well as the related shipping, receiving, picking and putaway processes. In common usage, the term may also refer to just the software components.

Modern inventory control systems rely upon barcodes, and potentially RFID tags, to provide automatic identification of inventory objects. In an academic study performed at Wal-Mart, RFID reduced Out of Stocks by 30 percent for products selling between 0.1 and 15 units a day. Inventory objects could include any kind of physical asset: merchandise, consumables, fixed assets, circulating tools, library books, or capital equipment. To record an inventory transaction, the system uses a barcode scanner or RFID readerto automatically identify the inventory object, and then collects additional information from the operators via fixed terminals (workstations), or mobile computers.

An inventory control system may be used to automate a sales order fulfillment process. Such a system contains a list of order to be filled, and then prompts workers to pick the necessary items, and provides them with packaging and shipping information.

Real time inventory control systems use wireless, mobile terminals to record inventory transactions at the moment they occur. A wireless LAN transmits the transaction information to a central database.

Physical inventory counting and cycle counting are features of many inventory control systems which can enhance the organization.

CHAPTER 5

CONCLUSION

In the conclusion it can be said that the Vishal Mega mart Bareilly is using various qualitative as well as quantitative inventory management techniques like EOQ,ABC,FSN etc for different product categories and they also uses SAP solution and RFID Chips which helps in effective Management of Inventory. On the basis of findings and analysis the overall Conclusion can be drawn as the Vishal Megamart Bareilly is able to reduce the Inventory cost as well as efficiently managing their replenishment system.

CHAPTER 6

SUGGESTIONS

- Even though the inventory cost is reduced by the different qualitative and quantitative techniquies used but they should also go in much detail of even small product caegories.
- In case of periodic Ordering system it may leads to the stock out situation due to uneven demand, so they should follow the perpetual system which keeps track of removals from inventory on a continuous basis. When the amount on hand reaches a predefined minimum quantity, a fixed quantity is then ordered. This system provides continuous monitoring of Inventory withdrawals and the setting of optimal order quantity.

CHAPTER 7

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QUESTIONNAIRE

Q.1)Does your organization follow any scientific inventory management technique?

a)Yes b)No

Q.2)What type of inventory management technique do you follow?

a)EOQ (Economic order quantity)

b)Selective inventory control techniques

1. **ABC**
2. **FSN**
3. **Others**
4.

Q.3)On what basis the method is selected for managing inventory?

a)Universal b)Product category wise

Q.4)Which type of ordering system is followed?

a)Periodic ordering system b)Fixed quantity ordering system.

Q.5)Do you use any technology or software for managing inventory?If yes,Please mention-

……

Q.6)How much percentage of inventory cost is reduced by following these techniquies?

a)10% -20%

b)20%-30%

c)30%-50%