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Inventory management and cost control

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Introduction

Inventory to all the businessmen, irrespective of size of their business, is the most important aspect of doing business. Inventory consists of raw material, WIP and finished goods. All the inventory involves locking up of huge sum of money. In case of retail stores, the unsold merchandise stocks is inventory. In simple words, inventory is nothing but anything that is necessary to carry on business. Inventory involves huge amount and hence must be handled wisely and cautiously. Infect, many business houses suffer losses due to poor management of inventory. Inventories, if not controlled properly, may turn out to be unreliable, inefficient and costly.

Ballon (2004) has defined inventories as “stockpiles of raw materials, supplies, components, work in process and finished goods that appear at numerous points throughout a firm’s production and logistic channels.” For efficient working of any organisation, it is necessary that proper inventory system must be in place to control and manage the inventory. An inventory system consists of policies and procedure that examines the current level of inventory and calculates what stock level should be maintained, at what level another order for stock must be placed. Though inventory is risky, yet it is considered as a necessary evil of a business and all the organisations need to hold the stock of inventory for several reasons that include reason of speculation, function, physical necessities or others. Inventory is important in any business as it forms the major part of current assets. It includes raw, semi- finished and finished goods. In short, it includes both- input as well as output. “The objective of inventory management is to turn over inventory as quickly as possible without losing sales from stock outs. Inventory management is of utmost importance because holding either too little or too much inventory incurs costs.

Objectives:

The objective of the paper is to understand the relation between inventory management and cost control and to suggest the innovative inventory management techniques that can be used in cost reduction.

Methodology: The paper is based on data collected form secondary sources such as newspapers, journals, books and internet.

Inventory Management and Cost Control:

Inventory management helps to free up the money that is locked in the areas of less importance and can help to divert the same in the areas of greatest value that will help to increase the productivity and growth of the company.

Inventory management helps to control cost in the following manner:

- **Prevent Product Spoilage:**

Product spoilage can add to cost of inventory. Perishable products such as vegetables, milk and milk products, medicines, etc. have to be watched carefully to make sure that these products are cleared before the expiration date or before they get spoiled. Companies mostly use First in First out (FIFO) method of inventory control to clear such inventory. This method helps to clear the older inventory first and then newer ones are utilised. This method helps to reduce wastage and thereby helps in cost control.

- **Prevent Product Decay and Obsolescence:**

If you are not dealing with perishable goods, it doesn’t mean you are safe. If a company is dealing with high- tech gadgets or other complex products, risk of inventory loss is even higher. As technology keeps changing very fast, piling up the stock of high tech gadgets can be risky. If you don’t sale all your gadgets before the technology change you will either have to sell them at deep discount or eat the whole cost.

- **Helps to maintain more cash on hand:**

If companies where inventory cost control method is in place, only necessary amount is locked up in inventory, also the company is able to cut down on product spoilage and decay which leaves more money on hand. All the money can be diverted in a place where it is needed the most or company can grow its business even more by investing in new employees, buying new facilities and so on.

- **Maintain Inventory Balance:**

Inventory Management helps to maintain a proper balance of inventory stock. Inventory management helps to make sure that you do not hold too little or too much quantity of stock. Cutting down cost by

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reducing the inventory stock does not mean that you buy such a little quantity that you may face a stock out situation. This may lead to loss. Hence, inventory management system helps to calculate maximum order level, minimum order level, reorder level that helps to avoid stock out situation.

Benefits of good inventory control:

As discussed above, inventory involves largest investment and if it is efficiently managed, it can be a source of number of financial benefits. Hence, a good inventory control system is necessary.

At a minimum, the financial benefits of good inventory control include two key areas:

- **Labor Cost Benefit:**

Fast moving inventory always need labor and labor involves a huge labor cost. Also, moving inventory increases the risk of misplacement or risk of loss which involves additional labor cost to find the same.

If good inventory control system is in operation, extra labor cost can be avoided. Installation of good inventory management software, helps in cost reduction and increases productivity of employee.

- **Inventory Cost Benefit:**

Stocking up of inventory involves cash flow. After paying the purchase price of inventory, additional cost such as warehousing, offset breakage, spoilage and shrinkage has also to be paid. Also there is a risk of inventory becoming obsolete.

Companies must install a good inventory software that tracks the purchases by date and by lot and match the same with sales orders.

Inventory Management Techniques for Cost Reduction:

Improper inventory management leads to blocking of cash and thus affects the profitability of the firm. Proper inventory management can help to clear the inventory at a faster pace and increase the profit of the company.

Planned inventory management always increases cash flow in the company. It helps us to calculate how much inventory should be purchased as per the sales order so that wastage due to overstocking or due to stock out situation can be avoided.

Inventory management strategies varies from company to company, but there are few strategies that are applicable to every firm irrespective of its size or nature. These strategies can be used by the firms to avoid human errors in the inventory management. The following are some necessary steps that must be taken to avoid the losses arising out of inventory mismanagement:

- **Track sales to forecast demand**

Great inventory management, to a large extent, boils down to accurate demand forecasting. If you can predict how many sales you expect to make, you have the knowledge you need to order the right amount of inventory.

To predict sales and demand, there are a few key factors you need to track:

- **Historical sales:** Identify ordering patterns at different times of the year to determine how much stock you need to buy to fulfill future orders. Close attention on the seasonal changes in sales must be paid as loss due to seasonal changes may be huge.
- **Planned promotions and marketing campaigns:** Predict the impact your promotions and planned marketing campaigns will have on sales and adjust your inventory accordingly.
- **The overall economy:** Based on the current state of the economy, predict how demand will increase or decrease for your sector and individual products.

By paying attention on above information, you will be able to accurately forecast the demand. Sales forecasting can help you to order only that quantity of inventory which is required and the losses arising out of piling up of inventory and wastage can be avoided.

- **Track your product category demand**

Forecasting the sales is only one of the many ways that can help to estimate the demand and manage the inventory accordingly. Demand can also be assessed on the basis of customers' search habits to get a clear picture of how much production should be undertaken. By analysis the searches done by the buyer, you can analyse whether the buyers' interest in product is increasing or you need to modify your product to grab their attention and accordingly inventory has to be managed.

The tool Google Trends can be used to track this interest. It allows you to see how demand and interest in search terms have changed over periods of time.

- **Centralize Your Inventory management**

If a firm is selling its product through multiple channels such as Amazon, Flipkart, Walmart, eBay, etc. there may be a complete mess in inventory management. If inventory is tracked and managed separately for each channel, then there are chances of error. Hence, it is necessary that inventory must be managed at one central place. By monitoring inventory from one centralized place, it is possible to keep a proper track on inventory.

- **Schedule inventory auditing**

Systematic inventory management helps in reducing the human error but at the same time manual counting of stock is a must. Automated method helps to generate reports of inventory stock and helps in day to day inventory management, however manual checking helps to cross check the inventory with the record.

There are a few key ways to audit your inventory:

- **Full, yearly check:** Annually, businesses will do an audit of their entire inventory where they count all of their stock at once.
- **Cycle counting:** Rather than checking all inventory at once, companies will reconcile the inventory of different products throughout the year.
- **Spot checking:** To complement scheduled inventory checks, spot checking is when you pick a specific product, count it, and compare the amount to what it's supposed to be according to your records. Spot checking is more beneficial for products with high turnover.

By physically checking and counting your inventory regularly, you ensure that your reporting is accurate and won't lead to overstocking or understocking.

- **Use ABC Analysis**

Some products require more attention than others. Using ABC analysis lets you prioritize the most important items in your inventory management to avoid overstocking and understocking. Under this analysis, materials are classified on the basis of valuation.

- **A:** High-value products that represent a small portion of the total inventory. It requires strict control and supervision.
- **B:** Moderate-value products that represent a decent portion of the total inventory. It requires routine supervision.
- **C:** Low-value products that represent the majority of the total inventory. It requires normal supervision.

The above categorization helps to decide which item needs more attention on the basis of their financial impact.

By categorizing your inventory under these letters, you can decide which items need the most attention based on their financial impact. For example, you may do spot checks more frequently on A-level items than C-level items to ensure that there's sufficient stock to fulfil orders.

Case Study:

The following is a case study of SIL (Scooter India Ltd.) which is a scooter manufacturing industry in Lucknow. The company is certified with ISO 9001:2000 certificate and ISO: 14001 certificate. The company is engaged in the business of manufacturing and selling of motor cars and its spare parts. The major focus of the company is on designing, developing, manufacturing and marketing a range of conventional and non- conventional three wheelers. Company designs both passengers and load carrier version of three- wheelers. It has own marketing network of Regional Sales offices to fulfill customer's requirements in the areas of sales and services.

a) Three-wheelers :Three – wheelers namely Vikram 410G, Vikram 450D, Vikram 600G, Vikram 750D, Vikram 750D (WC) and Vikram EV are manufactured by the company. These products are so designed as to meet the needs of local transportation.

b) Spares ;

c) Petrol, Diesel and Lubricants

Table No.1: Details of products manufactured in Scooters India Limited, Lucknow

Item No	Product list	Annual demand	Cumulative % of items	Annual Cost (Million Rupees)	Percentage in total usage (%)	Cumulative % of total usage

1	750 DAC	6230	14 %	917.79	36.53 %	36.53 %
2	450 DHB	6403	15%	736.17	29.30 %	6 65.83 %
3	450 DSTG	3276	13%	401.57	15.98 %	81.81 %
4	1500 CG	759	14%	139.21	5.54 %	87.35 %
5	Petrol, Diesel and Lubricant	-	15%	136.41	5.43 %	92.78 %
6	1000 CG	905	13%	116.01	4.62 %	97.40 %
7	Spare parts	-	16%	65.44	2.60 %	100 %
	Total annual cost			**2512.60**		

Source:Pramod Kumar, Mohd. Anas (2013), An ABC-Analysis for the Multiple- Products Inventory Management - Case Study of Scooters India Limited, IJREAT International Journal of Research in Engineering & Advanced Technology, Volume 1, Issue 5, Oct-Nov, 2013, ISSN: 2320 – 8791

Table-2 ABC classification

Category	**Items No**	**Product list**	**Approximate Percentage of items (%)**	**Percentage usage (%)**	**Action**
A	1,2	750 DAC, 450 DHB	30	65.83	Close control
B	3,4	450 DSTG, 500CG	30	21.52	Regular review
C	5,6, 7	(Petrol, Diesel and Lubricant),1000 CG Spare parts	40	12.65	Infrequent review

Source:Pramod Kumar, Mohd. Anas (2013), An ABC-Analysis for the Multiple- Products Inventory Management - Case Study of Scooters India Limited, IJREAT International Journal of Research in Engineering & Advanced Technology, Volume 1, Issue 5, Oct-Nov, 2013, ISSN: 2320 – 8791

Observation:

- Products 750 DAC and 450 DHB have maximum usage (65.83%) and hence close action and strict control is required for them as they belong to A category
- 450 DSTG and 500 CG have moderate usage (21.52%) and require regular review
- Petrol, Diesel, Lubricant and 1000 CG have minimum usage (12.65%) and hence, infrequent review can be done for them.

Conclusion

Tracking the supply of inventory impacts the cash flow just as much as a sales pitch. With a clear understanding of inventory, company can have control over profits. A company can catch a hold of how much it needs to have in stock in order to fulfill every order and earn maximum revenue without losing money through excess inventory.

The techniques suggested in this paper are fundamental strategies for practicing great inventory management. Inventory management is customizable to any business, so company must test and iterate different methods to see which processes are most effective in accurately tracking and saving money.

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