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A Study on Inventory Management at D Mart

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Abstract
The investment in inventories constitutes the most significant part of current assets/ working capital in most of the undertakings. Thus, it is very essential to have proper control and management of inventories. ABC analysis of inventory is a process of classifying the products based on the value of importance. This concept is derived from the Pareto principle of 80/20 rule which focuses on vital few from trivial many. Not all items in an inventory are of the same value, therefore these items are broken down into three categories A, B and C. There can be a system where in periodical review (twice in a month) of inventory could be carried out so that the inventory can be kept under control. Improve the minimum level of product C up to 5%-8% in total sales value by increasing market level of these products. It helps to get minimum return on investment in these products as soon as possible. There should be maintaining proper communication.
Keywords: *Investment, Inventories, ABC Analysis, Management, Control.*

1. Introduction

Every enterprise needs inventory for smooth running of its activities. It serves as a link between production and distribution process. There is, generally, a time lag between the recognition of a need and its fulfilment. The greater the time lag, the higher requirements for inventory. It also provides a cushion for future price fluctuations. In a complex industry like Retail it studied clearly of how the thing are being performed and what is the real impact of these on industry and how effectively the inventory is utilized is interested to be known by researcher because of its great significance in the research.; The investment in inventories constitutes the most significant part of current assets / working capital in most of the undertakings. Thus, it is very essential to have proper control and management of inventories. Inventory management is a critical task of tracking the flow of goods in and out of the inventory. As an inventory planner/manager you want to ensure that your warehouse is carrying enough stock to fulfil customer requirements but also not crowding the warehouse by overstocking it. Every product has various costs associated to it like holding costs, carrying costs and the aim of the inventory planner is to reduce these costs by not running low on stock. To help planners minimize these costs while optimizing their inventory, here is the ABC Analysis of Inventory technique and tool. ABC analysis of inventory is a process of classifying the products based on the value of importance [1-4]. This concept is derived from the Pareto principle of 80/20 rule which focuses on vital few from trivial many. Not all items in an inventory are of the same value, therefore these items are broken down into three categories A, B and C. Class A consists of most valuable items, although these items constitute only 10% of quantity they account for 70% – 80% of consumption value. Class B consists of items with moderate importance accounting for 10% – 20% of revenue. And class C consists of least valuable items that contribute to only 10% of revenue. This classification helps managers in prioritizing and monitoring items of high importance closely. An organization can benefit by adapting the ABC analysis in inventory management. Here are some of them. Every product goes through four phases during its lifespan: launch, growth, maturity and decline. Once the product reaches the maturity stage it is bound to decline sooner or later.

2. Meaning of Inventory

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Inventories are stock of the product a company is manufacturing for sale and components that make up the product. The various forms in which inventories exist in a manufacturing company are: raw materials, work-in-process and finished goods.

Raw materials are those basic inputs that are converted into finished product through the manufacturing process. Raw materials inventories are those units which have been purchased and stored for future productions.

Work-in-process inventories are semi-manufactured products. They represent products that need more work before they become finished products for sale.

Finished goods inventories are those completely manufactured products which are ready for sale. Stocks of raw materials and work-in-process facilitate production, while stock of finished goods is required for smooth marketing operations. Thus, inventories serve as a link between the production and consumption of goods.

3. Costs of Holding Inventory

One operating objective of inventory management is to minimize cost. There are two basic categories (i) Ordering or Acquisition or Set-up costs, and (ii) Carrying costs.

3.1 Ordering Costs

This category of costs is associated with the acquisition or ordering of inventory. Firms have to place orders with suppliers to replenish inventory of raw materials. The expenses involved are referred to as ordering costs. Included in the ordering costs are costs involved in(i) preparing purchase order or requisition form and (ii) receiving, inspecting, and recording the goods received to ensure both quantity and quality [5]. The cost of acquiring materials consists of clerical costs and costs of stationery. It is, therefore, called a set-up cost. They are generally fixed per order placed, irrespective of the amount of the order. The larger the orders placed the costs. The acquisition costs are inversely related to the size of inventory: they decline with the level of inventory.

3.2 Carrying Costs

Those that arise due to the storing of inventory. The main components of this category of carrying costs are (i) storage cost, that is, tax, depreciation, insurance of the building, utilities and janitorial services; (ii) insurance of inventory against fire and theft; (iii) deterioration in inventory because of pilferage, fire, technical obsolescence, style obsolescence and price decline; (iv) serving costs, such as, labour for handling, clerical and accounting costs. he opportunity cost of funds. This consists of expenses in raising funds (interest on capital) to finance the acquisition of inventory. If funds were not locked up in inventory, they would have earned a return. This is the opportunity cost of funds or the financial cost component of the cost. The sum of the order and carrying costs represents the total cost of inventory. This is compared with the benefits arising out of inventory to determine the optimum level of inventory.

4. Benefits of Holding Inventory

The basic function of inventories is to act as buffer to decouple or uncouple the various activities of a firm so that all do not have to be pursued at exactly the same rate 3. The key activities are: Purchasing, Production, Work-in-Process, Selling.

Benefits in Purchasing: A firm can purchase larger quantities than is warranted by usage in production or the sales level. This will enable it to avail of discounts that are available on bulk purchases. Moreover, it will lower the ordering cost as fewer acquisitions would be made. There will, thus, be a significant saving in the costs. Second, firms can purchase goods before anticipated or announced price increases. This will lead to a decline in the cost of production. Inventory, thus, serves s a hedge against price increase as well as shortages of raw materials. This is a highly desirable inventory strategy.

Benefits in Production: Finished goods inventory serves to uncouple production and sale. This enables production at a rate different from that of sales. That is, production can be carried on at a rate higher or lower than the sales rate. This would be of special advantage to firms with seasonal sales pattern. In their case, the sales rate was higher than the production rate during a part of the year (peak season) and lower during the offseason. The choice before the firm is either to produce at a level to meet the actual demand, that is, higher production during peak season and lower (or nil) production during off-season, or, produce continuously throughout the year and build up inventory which was sold during the period of seasonal demand.

Benefits in Work-In-Process: The inventory of work-in-process performs two functions. In the first place, it is necessary because production processes are not instantaneous. The amount of such inventory depends upon technology and the efficiency of production. The larger the steps involved in the production process, the larger the work-in-process inventory and vice versa. In a multi-stage production process, the work-in-process inventory serves purpose also.

Benefits in Sales: The maintenance of inventory also helps a firm to enhance its sales efforts. A firm will not be able to meet demand instantaneously. There was a lag depending upon the production process. If the firm has inventory, actual sales will not have to depend on lengthy manufacturing processes. Thus, inventory serves to bridge the gap between current production and actual sales. A basic requirement in a firm s competitive position is its ability vis-à-vis its competitors to supply goods rapidly.

5. Need for Inventory Control

If a cost accounting system is to be effective there must be a proper control of inventory and supplies form the time orders are placed with suppliers until they have been effectively utilized in production. Materials are equivalent to cash and they make up an important part of the total cost. It is essential that materials should be properly safeguarded and correctly accounted. Proper control of material can make a substantial contribution to the efficiency of a business [6]. The success of a business concern largely depends upon efficient purchasing, storage, consumption and accounting. In a large firm the planning and routing department is responsible for arranging how and where the work is to be done and issue instructions. It sets definite time schedules so that necessary materials are delivered to the proper department in proper time not too long before hand neither lest it should interfere with other work nor after they are required as this result. Every firm big or small trading or manufacturing has to maintain some minimum level of inventories. Based on some motives the inventories are maintained.

Transaction Motives: Every firm has to maintain some level of inventory to meet the day-to-day requirements of sales, production process, customer demand etc. In this finished goods as well as raw material are kept as inventories for smooth production process of the firm.

Precautionary Motive: A firm should keep some inventory for unforeseen circumstances also like loss due to natural calamities in a particular area, strikes, lay outs etc., so the firm must have some finished goods as well as raw-materials to meet circumstances.

Speculative Motive: The firm may be made to keep some inventory in order to capitalize an opportunity to make profit due to price fluctuations.

6. Reasons and Benefits of Inventory

The optimal level of maintaining inventory is a subjective matter and depends upon the features of a particular firm,

Trading Firm: In case of a trading firm there may be several reasons for holding inventories because of sales activities that should not be interrupted. Moreover, it is not always possible to procure the goods whenever there is a sales opportunity as there is always a time gap required between purchase and sale of goods. Thus trading concern should have some stock of finished goods in order to undertake sales activities independent of the procurement schedule.

Manufacturing Firm: A manufacturing firm should have inventory of not only the finished goods, but also of raw materials and work-in-progress for following reasons.

Uninterrupted Production Schedule: Every manufacturing firm must have sufficient stock of raw materials in order to have the regular and uninterrupted production schedule. If there is stock out of raw materials in order to have the regular and uninterrupted production schedule. If there is stock out of raw material at any stage of production process, then the whole production may come to a half.

Further work-in-progress would let the production process run smooth. In most of manufacturing concerns the work in progress is a natural outcome of the production schedule and it also helps in fulfilling when some sales orders, even if the supply of raw-materials have stopped.

Independent sales activity: Inventory of finished goods is required not only in trading concern but manufacturing firms should also have sufficient stock of finished goods. The production schedule is a time consuming process and in most of the cases goods cannot be produced just after receiving orders. Therefore, every firm has to maintain minimum level of finished goods in order to deliver the goods. The purchase price of material is directly obtained from the suppliers receives and have to be issued to production before the invoice of materials is received. The rate per unit, total price of the item as shown in the purchase order plus sundry charges such as delivery and forwarding charges sales tax, duty etc, may be borne by suppliers, Governments controlled prices by notifications, suppliers, catalogues and circulars may be valuable guides for obtaining rates of materials. Delivery charges may be estimated with reference to the kind of transport with charges incurred. The price may also include sales tax, excise duty, fright etc, so the total cost and rate per unit can be computed and rate per unit can be computed and entered in the stores received registered and posted to stores ledger for the issue of material to production.

7. Market Size

India's retail market is expected to increase by 60 per cent to reach US$ 1.1 trillion by 2020, on the back of factors like rising incomes and lifestyle changes by middle class and increased digital connectivity. While the overall retail market is expected to grow at 12 per cent per annum, modern trade would expand twice as fast at 20 per cent per annum and traditional trade at 10 per cent. Indian retail market is divided into "Organized Retail Market" which is valued at $60 billion which is only 9 per cent of the total sector and "Unorganized Retail Market constitutes the rest 91 per cent of the sector. India's Business to Business (B2B) e-commerce market is expected to reach US$ 700 billion by 2020.Online retail is expected to be at par with the physical stores in the next five years and has grown 23 per cent to $17.8 billion in 2019.India's total potential of Business to Consumer (B2C) is estimated to be US$ 26 billion, of which $3 billion can be achieved in the next three years from 16 product categories, according to a study by Federation of Indian Chambers of Commerce and Industry (FICCI) and Indian Institute of Foreign Trade (IIFT).India has replaced China as the most promising markets for retail expansion, supported by expanding economy, coupled with booming consumption rates, urbanizing population and growing middle class.

8. Investment Scenario

The Indian retail trading has received Foreign Direct Investment (FDI) equity inflows totalling US$1.09 billion during April 2000–September 2019, according to the Department of Industrial Policies and Promotion (DIPP). With the rising need for consumer goods in different sectors including consumer electronics and home appliances, many companies have invested in the Indian retail space in the past few months. Department of Industrial Policy and Promotion (DIPP) approved three foreign direct investments (FDI), Mountain Trail Food, Kohler India Corporation, and Merlin Entertainments India in the single brand retail sector and two FDI proposals of over Rs 400 crore (US$ 62.45 million) within the retail sector. With 2019 being a successful year for herbal-ayurvedic brands, new Indian organic labels in hair care, cosmetics, food and apparel are belting up to carve an organic niche in the growing herbal segment. Investments by private equity firms in Indian retail sector reached US$ 200 million in the first half of 2019, with seven new global brands entering India during the period.

Conclusion

In conclusion, the study on inventory management at D Mart has provided valuable insights into the strategies and practices employed by the company to effectively manage its inventory. The research has shed light on the significance of efficient inventory management in the retail sector and how it contributes to overall business success. Through a comprehensive analysis of D Mart's inventory management system, it is evident that the company employs a well-structured and systematic approach to ensure optimal stock levels, minimize stock outs, and reduce carrying costs. The

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implementation of advanced technologies and data-driven decision-making processes has played a crucial role in enhancing the accuracy and efficiency of inventory control. Furthermore, the study has highlighted the importance of inventory turnover and the role it plays in gauging the effectiveness of D Mart's inventory management practices [7]. The findings suggest that the company's focus on maintaining a high inventory turnover ratio is aligned with industry best practices, ensuring a rapid and continuous flow of goods through the supply chain. However, it is crucial to acknowledge that the effectiveness of inventory management is an ongoing process that requires continuous monitoring and adaptation to changing market dynamics. As such, recommendations for further improvement include exploring emerging technologies, implementing predictive analytics, and fostering collaboration with suppliers to enhance the overall efficiency of the supply chain. In conclusion, this study has provided valuable insights into D Mart's inventory management practices, contributing to the existing body of knowledge in the field [8]. It serves as a foundation for future research endeavours and offers practical implications for businesses seeking to optimize their inventory management processes in the dynamic and competitive retail landscape.

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