

INVENTORY MANAGEMENT SYSTEM FOR RETAILERS

Introduction:

Inventory is the supply of raw materials, partially finished goods called work-in-progress and finished goods, an organization maintains to meet its operational needs. It represents a sizeable investment and a potential source of waste that needs to be carefully controlled. Inventory is defined as a stock of goods that is maintained by a business in anticipation of some future demand. The quantity to which inventory must fall in order to signal that an order must be placed to replenish an item. Using an extension of a standard inventory-dependent demand model provide a convenient characterization of products that require early replenishment. The optimal cycle time is largely governed by the conventional trade-off between ordering and holding costs, whereas the reorder point relates to a promotions-oriented cost-benefit perspective. The optimal policy yields significantly higher profits than cost-based inventory policies, underscoring the importance of profit-driven inventory management. To work towards perfect order metrics, there has to be aggressive inventory management, restructuring supply chain operations, and updating standards to the perfect standard. When updating the metrics, this would include the cases shipped vs. the orders on-time delivery, data synchronization, damages and unusable products, days in supply, the ordering time cycle, and shelf level of service. Inventory problems of too great or too small quantities on hand can cause business failures. If an organization experiences stock-out of a critical inventory item, production halts could result.

Inventory management indicates the broad framework of managing inventory. The inventory management technique is more useful in determining the optimum level of inventory and finding answers to problems of safety stock and lead time. Inventory most corporate entities and this is in response to the fact that inventory is an asset of distinct feature. Figure 1. Showing production of raw material into finished good

Objectives:

Operational and financial goals may be examined in regards to inventory management. The operational goal is to have an adequate supply of inventory, so that we can fulfil customer demand and the financial objective is to minimise unnecessary inventory and its associated expenses.

For these operational tasks, inventory management is done to help streamline operations. Some of the most important purposes for which it is used are:

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Literature Survey:

Cinthya Vanessa Munoz, Jorge Andres Espinoza, Rodrigo Arcentales-Carrion, Mario Pena, "Inventory management for retail companies".

Conclusion:

Inventory management has to do with keeping precise records of finished goods that are ready for shipment. This often means posting the production of newly completed goods to the inventory totals as well as subtracting the most recent shipments of finished goods to buyers. When the company has a return policy in place, there is usually a sub category contained in the finished goods inventory to account for any returned goods that are reclassified or second grade quality. Accurately maintaining figures on the finished goods inventory makes it possible to quickly convey information to sales personnel as to what is available and ready for shipment at any given time. The ROI of Inventory management will be seen in the forms of increased revenue and profits, positive employee atmosphere, and on overall increase of customer satisfaction. The next step of the present research will be the application of achieved results of demand forecasts, safety stock and reorder points into simulation software in order to achieve more accurate results.

Reference:

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LACCEI'2011, Aug. 3–5, 2011, Medellin, Colombia. [6] D. Dhoka, Y.L. Choudary “ABC Classification for Inventory Optimization,” IOSR Journal of Business and Management, vol. 15, Issue 1, Nov. – Dec. 2013, pp. 38–41. <http://dx.doi.org/10.9790/487X-1513841> [7] Life cycle engineering [Online] Available: <http://www.lce.com/pdf/abcclassification.pdf> [Accessed: Sept. 25, 2015] [8] ABC analysis (Inventory) By Joffrey Collignon, Joannes Vermorel, Feb. 2012 [Online] Available: [http://www.lokad.com/abc-analysis-\(inventory\)-definition](http://www.lokad.com/abc-analysis-(inventory)-definition) [Accessed: Sept. 25, 2015] [9] ABC Inventory Analysis using Excel. Posted on October 1st, 2014. [Online] Available: <http://chandoo.org/wp/2014/10/01/abc-inventory-analysis-using-excel> [Accessed: Sept. 25, 2015] [10] ABC analysis. [Online] Available: [https://www.brookes.ac.uk/Documents/Students/Upgrade/ABC analysis](https://www.brookes.ac.uk/Documents/Students/Upgrade/ABC%20analysis) [Accessed: Sept. 25, 2015] [11] J.J. Liu, Supply Chain Management and Transport Logistics. Routledge, 2012. 560 p. [12] Demand Forecasting. [Online] Available: <http://www.smetoolkit.org/smetoolkit/en/content/en/416/Demand-Forecasting> [Accessed: Sept. 25, 2015] Jour of Adv Research in Dynamical & Control Systems, Vol. 10, 10-Special Issue, 2018 119