INVENTORY MANAGEMENT SOFTWARE

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***Abstract*—Inventory Management software works for inventory tracking and control. Solutions for managing inventory, sale, purchase and shipping etc. Inventory is a list of goods in stock i.e. total amount of materials contained in a unit/store. Inventory Management software is the management of that list of material in stock. There should be constant inflow and outflow of material, it should be a consistently controlled process so that inventory should not become too high or too low. Buffer stock should be kept in order to meet.**

The software consists of Admin module and User module. In Admin module, Administrator can add, manage Users, Products, and Formulas. He can view the Merchant Returns, Reports and Users list. In User module, User will perform Product Sales and can view the Customer Returns.

I. Introduction

INVENTORY refers to the goods or materials used by a firm for the purpose of production and sale. It also includes the items, which are used as supportive materials to facilitate production. There are three basic types of inventory: raw materials, work-in-progress and finished goods. Raw materials are the items purchased by firms for use in production of finished product. Work-in-progress consists of all items currently in the process of production. These are actually partly manufactured products. Finished goods consist of those items, which have already been produced but not yet sold.

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Importance -Enables to address two important issues:
1. The firm has to maintain adequate inventory for smooth production and selling activities.
2. It has to minimize the investment in inventory to enhance firm's profitability.

Investment in inventory should neither be excessive nor inadequate. It should just be optimum. Maintaining optimum level of inventory is the main aim of inventory management. Excessive investment in inventory results into more cost of fund being tied up so that it reduces the profitability, inventories may be misused, lost, damaged and hold costs in terms of large space and others. At the same time, insufficient investment in inventory creates stock-out problems, interruption in production and selling operation. Therefore, the firm may lose the customers as they shift to the competitors. Financial manager, as he involves in inventory management, should always try to put neither excessive nor inadequate investment in inventory. The importance or significance of inventory management could be specified as below:
(A)Inventory management helps in maintaining a tradeoff between carrying costs and ordering costs which results into minimizing the total cost of inventory.
(B)Inventory management facilitates maintaining adequate inventory for smooth production and sales operations.
(C)Inventory management avoids the stock-out problem that a firm otherwise would face in the lack of proper inventory management.
(D)Inventory management suggests the proper inventory control system to be applied by a firm to avoid losses, damages and misuses.

Reasons to Hold Inventory

Most businesses hold inventory for many reasons. Among them are:
(A)Meeting unexpected demands
The chain of supply and demand really comes into consideration here. Business people know that consumers expect goods and services when they need them. Thus, businesses usually stock up their inventories to meet these unexpected demands. These demands may result in overcrowding of inventories because we never know when the storm strikes and consumers would flock to buy the items.
(B)Smoothing seasonal demands
With the comings and goings of major events and the changing seasons, most businesses have inventories at hand to smoothen the seasonal demands. For example, Christmas is just round the corner. With the coming season, retail outlets as well as other businesses are busy meeting and stabilizing the upcoming Christmas demands of consumers. If they do not have any inventory, how can they meet these demands?
(C)Taking advantage of price discounts
When a business purchases goods from the manufacturers and suppliers, they usually get price discounts if they buy in bigger bulks. Manufacturers and suppliers give these discounts to attract and maintain regular buyers. Taking advantage of price discounts is helpful at times but one must always remember not to overstock the inventory because inefficient buying may cause failure of the business.
(D)Hedging against price increase
Businesses usually hold inventory to avoid from the ever fluctuating market price of inventories. Thus, by having

efficient and good inventory system, businesses can control their inventory cost.

(E)Getting quality discounts

When businesses have inventory in store, they can get quality discounts because they know which goods and services to buy from the suppliers and manufacturers. It helps to learn where to get better deals than no deal at all.

II. Related Works

Maintained the Basic Relationship- Average Inventory
Without safety stock:
Average inventory = 1/2 order quantity
With safety stock:
Average inventory = 1/2 order quantity + safety stock

Safety stock refers to an additional amount of stock carried over the normal stocking level requirements as a buffer against uncertainty.

Inventory management software is made up of several key components, all working together to create a cohesive inventory for many organizations' systems. These features include:

Order management

Should inventory reach a specific threshold, a company's inventory management system can be programmed to tell managers to reorder that product. This helps companies avoid running out of products or tying up too much capital in inventory

Asset tracking

When a product is in a warehouse or store, it can be tracked via its barcode and/or other tracking criteria, such as serial number, lot number or revision number.[3] Nowadays, inventory management software often utilizes barcode, radio-frequency identification (RFID), and/or wireless tracking technology.

Service management

Companies that are primarily service-oriented rather than product-oriented can use inventory management software to track the cost of the materials they use to provide services, such as cleaning supplies. This way, they can attach prices to their services that reflect the total cost of performing them.

Product identification

Barcodes are often the means whereby data on products and orders is inputted into inventory management software. A barcode reader is used to read barcodes and look up information on the products they represent.[5] Radio-frequency identification (RFID) tags and wireless methods of product identification are also growing in popularity.

III.METHODS

The success of a business depends on how well the owner(s)'s ability to maintain adequate quantities of items sold. Records provided by an inventory control system should call attention to the need for reorder when necessary or eliminate "deadwood" inventory when called for. Inventories are controlled and supervised by three (3) methods:

(I) Perpetual Inventory Control- The perpetual method is the most frequently used method. It is more costly than the other two but it is an efficient way of keeping count. In this system, complete data records are kept on each item of merchandise and additions or subtractions are made with each transaction. There is an inventory balance plus a receipt of sale, minus the actual sale to reflect the quantity at hand.

(II) Actual Counting Piece- This is another method used to control and supervise inventory. It is used to actually count inventory item-by-item. This is an exhausting task and not many companies or businesses do it. Salespeople are usually involved in this process and there is a large margin of error to be considered as the salespeople go through the monotonous and tiring task of counting everything.

(III) "Looking It Over"- The third method is "Looking over" the inventory. It is the easiest and cheapest way of controlling and supervising inventory, but there is bound to be errors. With this method, it is hard to pinpoint the inventory levels, the items that need to be ordered, and the items that the store is overstocked with. Almost all financial statements that include inventory figures based on this method cannot be completed accurately.

To understand the various inventory management techniques it is crucial to know why it is important.

(A)First, a mismanaged inventory can lead to an unnecessary increase in the working capital. The excess funds could have been fruitfully directed to fuel the company's growth initiatives or research and development efforts.

(B)Second, effective inventory management would lead to low storage costs, which will in turn lead to an increase in the company's profits. Storage space is expensive; if you are able to manage your inventory well and able to reduce the amount of goods that you need to store, then you will require less space, which will in turn lead to low warehouse rental costs.

(C)Third, it can help you satisfy your customers by providing them with the products they need in the swiftest manner. Poor inventory management leads to lower availability of goods and higher delivery time. Hence, if you want to gain those service satisfaction stars, you need to manage your inventory well.

(D)Fourth, goods stored in inventory over a long period may spoil. This leads to unnecessary overheads in operating a business. Hence, proper inventory management can help you reduce those costs greatly.

(E)Fifth, if you have inventories scattered in various locations, you need a proper system to manage those inventories on the basis of demand and supply. Inventory management techniques can help you go a long way in managing multiple inventories.

Various businesses have employed the basic inventory management techniques or inventory control methods to keep their inventory costs in check. Inventory management has become an intrinsic part of supply chain management. There are various methods that an organization may use to manage its inventory:

Just in Time (JIT)-Reduce the size of the inventory and leads to low storage costs. Although, early identification and order of all items required in the future should always be there to make this approach effective. Early identification of risks is also a prime concern in managing a business properly; click here to take a course on how to manage risk in Information Technology.

Accurate Response-Helps businesses manage their inventory, which may get overloaded due to improper forecasts. Businesses greatly manage their inventory on the basis of future demand predictions. It has become increasingly important for these forecasts to be accurate for a business to keep itself alive in the cut-throat competition. Since more and more companies have come up with sophisticated inventory management systems that give accurate forecasts on product demands, the need for accurate response is highly needed.

VI FUTURE ENHANCEMENT

There is always a room for improvement in any software package, however good and efficient it may be. But the improvement thing is that the system should be flexible enough for further modifications. Considering this important factor, the system is designed in such a way that provisions can be given for further enhancement without affecting the system presently developed.

VII. CONCLUSION

The system was mainly designed to reduce the manual work of updating and tracking and also make it easier for the user.
It also provides flexible and powerful reports regarding customer details, issue details and stock details.
Thus inventory system was implemented successfully

REFERENCES

[1] Lesonsky, Rieva (1998). "Tracking Inventory". *Entrepreneur Magazine*.

[2] Lesonsky, Rieva (1998). "Inventory Control". *Entrepreneur Magazine*.

[3] "Inventory Control Systems". *Reference for Business, Encyclopedia of Business, 2nd ed*.

[4] "inventory software". Webopedia.Retrieved 23 November 2012.

[5] DeBaise, Colleen (August 10, 2010). "Technology Basics for Business". *The Wall Street Journal Complete Small Business Guidebook*.

[6] Dolinsky, Anton. "Inventory Management History Part Four".Almyta Systems.Retrieved August 17, 2010.

[7] Polsson, Ken. "Chronology of Personal Computers – 1981".Polsson'sWebWorld.Retrieved August 17, 2010.

[8] Moskowitz, Robert. "Using Your Computer for Inventory Control".Accvision.Retrieved August 17, 2010.

[9] Piasecki, Dave. "Optimizing Economic Order Quantity – Carrying Costs". Inventoryops.com. Retrieved August 17, 2010.

[10] K, Scholasticus (May 26, 2010). "Inventory Management Techniques".Buzzle.com.

[11] Brooame, Jr., J. Tol (June 1999). "The Benefits of Smart Inventory Management Software".CBS Interactive.

[12] "Advantages Of Inventory Management Software". AuthorStream.p. 7.Retrieved 23 November 2012.

[13] DesMarais, Christina (24 May 2011). "Choosing the Best Inventory Tracking Software". Inc.com. Retrieved 23 November 2012.

[14] Lockard, Robert (29 November 2010). "3 Advantages of Using Inventory Management Software".Inventory System Software Blog.Retrieved 23 November 2012.

[15] "Inventory Management Software". EGA Futura. Retrieved 23 November 2012.

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