INVENTORY- A TWO EDGED SWORD?

Hasnan Baber*

AdilZahoor*

Abstract

Inventory is as old as human. Inventory complications have been faced by every society, but it was not until the 20th century that analytical techniques were to study them. The initial impetus, for analysis expectedly came from manufacturing sector. In theory, inventory is an area of organisational operation that is well developed. In practice, it is very backward. Inventories today have good-guy and a bad-guy image. There are many reasons that why we like to have inventories but there are also reasons why holding inventories is considered to be unwise. There arise a need to see how much inventory is needed with least cost. We often say "inventory is necessary evil" but how true it is?

Keywords: Inventory, management, inventory cost, sword, stock

* Assistant Professor, School of business studies, Islamic University Of Science and Technology, Pulwama-Jammu and Kashmir

1. Introduction

The term inventory includes the following categories of items:

i. Production inventories: Raw materials, parts and components which enter the firm's product in the production process.

ii. MRO Inventories: Maintenance, repair and operating supplies which are consumed in the production process but which do not become part of the product.

iii. In-process Inventories: Semi- finished products found at various stages in the production operation.

iv. Finished goods inventories:Completed products ready for shipment.

Inventory is a necessary evil that every organization would have to maintain for various purposes. Optimum inventory management is the goal of every inventory planner. Over inventory or under inventory both cause financial impact and health of the business as well as effect business opportunities.

Inventory holding is resorted to by organizations as hedge against various external and internal factors, as precaution, as opportunity, as a need and for speculative purposes.

There is need for installation of a proper inventory control technique in any business organization in developing country like Nigeria. According to Kotler (2000), inventory management refers to all the activities involved in developing and managing the inventory levels of raw materials, semi-finished materials (work- in-progress) and finished good so that adequate supplies are available and the costs of over or under stocks are low..

Causes of Inventory

- Acceptant of inventory as normal or as a necessary evil
- Poor equipment layout
- Long changeover times
- Large-lot production or purchasing
- Obstructed flow of goods
- Stocking on speculation
- Defective material

An awareness revolution must occur in everyone if inventory is to be eliminated or reduced.

People must believe in the possibility of zero inventory; inventory covers up problems; it never solves them.

Many businesses aren't as successful as they could be simply because they lack the know-how or the will to implement sound inventory management and control practices. Successful inventory management is a compromise between low inventory levels and meeting targeted fill rates. Investing in the right inventory and reducing excess will improve customer fill rates, inventory turnover, and cash flow and profits.

2. Objective:

- To study views of inventory
- To study why should we want to hold inventories?
- To study why do not want to hold inventories?

3. Literature Review

Vikram Tiwari, SrinageshGavirneni, (2007) in their article"ASP, The Art and Science of Practice: Recoupling Inventory Control Research and Practice: Guidelines for Achieving Synergy" focused on the widening disconnect between inventory-control researchand practice, people debate the value of incremental theorybuilding. While practitioners make decisions in a complex anduncoordinated environment, researchers often adopt a simplisticenvironment for the sake of rigorous analysis.

The stakeholder's " mismatched objectives and motivations may cause this lack ofsynergy. Controlling and reducing this disconnect would benefitboth practitioners and researchers. The existing empirical analysis of companies" business improvements based on academicinventory-management theories is inconclusive.

Even so, somebusinesses have successfully implemented inventory theory; however,in most cases, they have greatly modified the inventory modelsdeveloped by academics.

B.J. Grablowsky, (2005) in his paper "Financial management of inventory" surveyed

Small business inventory management practices and compared with techniques commonly employed by large corporations. It appears that smaller firms rely on

Simple controls. Large businesses rely more on quantitative techniques, such as

EOQ and linear programming, to provide additional information for decision-making,

While small firms are more likely to use management judgment without the quantitative back-up. Of those small firms which did not use quantitative methods for determining inventory order and stock levels, the most common qualitative methods were "past experience" and "executive judgment,".

4. Findings and Results

4.1 Why we want to hold inventories

Inventories are essential, but the imperative issue is how much inventory to hold.

In addition to the strategic importance in providing finished-goods inventory so that customer service is enriched through fast shipment of customers' orders, we also hold inventories because by doing so certain costs are reduced:

1. Ordering cost: Each time we purchase a batch of raw material from a supplier, a cost is incurred for processing the purchase order, expediting, record keeping, and receiving the order into the storeroom. Each time we yield a production lot, a changeover cost is incurred for changing production over from a previous product to the next one. The larger the lot sizes, the more inventory we hold, but we order fewer times during the year and annual ordering costs are lower.

2. Stockout costs: Each time we run out of raw materials or finished-goods inventory, costs may be incurred. In finished-goods inventory, stockout costs can include lost sales and dissatisfied customers. In raw-materials inventory, stockout costs can include the cost of disruptions to production and sometimes even lost sales and dissatisfied customers. Additional inventory, called can be carried to provide insurance against excessive stockouts.

3. Acquisition costs: For purchased materials, ordering larger batches may increase raw-materials inventories, but unit costs may be lower because of quantity discounts and lower freight and materials-handling costs. For produced materials, larger lot sizes increase in-process or finished-goods inventories, but average unit costs may be lower because changeover costs are amortized over larger lots.

4. Start-up quality costs: When we first begin a production lot, the risk of defectives is great. Workers may be learning, materials may not feed properly, machine settings may need adjusting,

and a few products may need to be produced before conditions stabilize. Larger lot sizes mean fewer changeovers per year and less scrap.

Inventories can be indispensable to the efficient and effective operation of production systems. But there are good reasons why we do not want to hold inventory.

4.2 Why We Do Not Want to Hold Inventories

Certain costs increase with higher levels of inventories:

1. Carrying cost: Interest on debt, interest income foregone, warehouse rent, cooling, heating, lighting, cleaning, repairing, protecting, shipping, receiving, materials handling, taxes, insurance, and management are some of the costs incurred to insure, finance, store, handle, and manage larger inventories.

2. Cost of customer responsiveness: Large in-process inventories clog production systems. The time required to produce and deliver customer orders is increased and our ability to respond to changes in customer orders diminishes.

3. Cost of coordinating production: Because large inventories clog the production process, more people are needed to unsnarl traffic jams, solve congestion-related production problems, and coordinate schedules.

4. Cost of diluted return on investment (ROI). Inventories are assets, and large inventories reduce return on investment. Reduced return on investment adds to the finance costs of the firm by increasing interest rates on debt and reducing stock prices.

5. Reduced-capacity costs. Inventory represents a form of waste. Materials that are ordered, held, and produced before they are needed waste production capacity.

6. Large-lot quality cost. Producing large production lots results in large inventories. On rare occasions, something goes wrong and a large part of a production lot is defective. In such situations, smaller lot sizes can reduce the number of defective products.

7. Cost of production problems. Higher in-process inventories camouflage underlying production problems. Problems like machine breakdowns, poor product quality, and material shortages never get solved.

4.3 Ideas for Improvement

Inventory management simply means the methods you use to organize, store and replace inventory, to keep an adequate supply of goods while minimizing costs. Each location where goods are kept will require different methods of inventory management. Keeping an inventory,

or stock of goods, is a necessity in retail. Customers often prefer to physically touch what they are considering purchasing, so you must have items on hand. In addition, most customers prefer to have it now, rather than wait for something to be ordered from a distributor. In manufacturing, inventory management is even more important to keep production running. Every minute that is spent down because the supply of raw materials was interrupted costs the company unplanned expenses.

Counting Current Stock All businesses must know what they have on hand and evaluate stock levels with respect to current and forecasted demands. You must know what you have in stock to ensure you can meet the demands of customers and production and to be sure you are ordering enough stock in the future. Counting is also important because it is the only way you will know if there is a problem with theft occurring at some point in the supply chain. When you become aware of such problems you can take steps to eliminate them.

Managing Small Items Inventory control simply knows how much inventory you have. It is a means to control loss of goods. Businesses that use large quantities of small items often use an "80/20" or ABC rule in which they keep track of 20 percent of the largest value inventory items and use it to represent the whole. "A" items are the top valued 20 percent of the company's inventory, both in terms of the cost of the item and the need for the item in the manufacturing or sales process. Controlling this top 20 percent will control 80 percent of their inventory costs. "B" items are those of mid- range value and "C" items are cheap and rarely in demand. The retailer or manufacturer can now categorize all items in the inventory into one of these three classes and then monitor the stock according to value. "A" items would be counted and tracked regularly, while "B" and "C" items would be counted only monthly or quarterly.

Cyclical Counting Many companies prefer to count inventory on a cyclical basis to avoid the need for shutting down operations while stock is counted. This means that a particular section of the warehouse or plant is counted at particular times, rather than counting all inventory at once. In this way, the company takes a physical count of inventory, but never counts the entire inventory at once. While this method may be less accurate than counting the whole, it is much more cost effective.

Controlling Supply and Demand Whenever possible, obtain a commitment from a customer for a purchase. In this way, you ensure that the items you order will not take space in your inventory for long. When this is not possible, you may be able to share responsibility for the cost

of carrying goods with the salesperson, to ensure that an order placed actually results in a sale. You can also keep a list of goods that can easily be sold to another party, should a customer cancel. Such goods can be ordered without prior approval.

Stock Control Approval procedures should be arranged around several factors. You should set minimum and maximum quantities which your buyers can order without prior approval. This ensures that you are maximizing any volume discounts available through your vendors and preventing over-ordering of stock. It is also important to require pre-approval on goods with a high carrying cost.

Keeping Accurate Records Any time items arrive at or leave a warehouse, accurate paperwork should be kept, itemizing the goods. When inventory arrives, this is when you will find breakage or loss on the goods you ordered. Inventory leaving your warehouse must be counted to prevent loss between the warehouse and the point of sale. Even samples should be recorded, making the salesperson responsible for the goods until they are returned to the storage facility. Records should be processed quickly, at least in the same day that the withdrawal of stock occurred.

Managing Employees Buyers are the employees who make stock purchases for your company. Reward systems should be set in place that encourage high levels of customer service and return on investment for the product lines the buyer manages. Warehouse employees should be educated on the costs of improper inventory management. Be sure they understand that the lower your profit margin, the more sales must be generated to make up for the lost goods. Incentive programs can help employees keep this in perspective. When they see a difference in their paychecks from poor inventory management, they are more likely to take precautions to prevent shrinkage.

Inventory management should be a part of your overall strategic business plan. As the business climate evolves towards a green economy, businesses are looking for ways to leverage this trend as part of the "big picture". It can also mean putting in place recycling procedures for packaging or other materials. In this way, inventory management is more than a means to control costs; it becomes a way to promote your business.

4.4 Implementation and Execution

Building a better solution from start to finish will yield results for Increased Inventory Management. More efficient operations provide bottom-line results.

- Improving Inventory Management is an activity-based solution designed specifically to create maximum efficiency and optimum cost-control throughout your department, which will:
- Define inventory processes, activities and controls from a results-driven standpoint.
- Define tasks and inventory process parameters in measurable and verifiable terms that emphasize efficiencies to produce desired results.
- Validate task performance to attain the highest efficiencies in inventory processes through task monitoring, measurement and validation, put the right people in the right jobs.
- Continuously provide real-time, real-performance task and process data for efficiency as well as inventory micro-adjustments.
- Implement all activity-based management initiatives through to full execution in inventory for maximum efficiency, productivity, cost-containment and profitability.

5. Conclusion:

Inventories should neither be excessive nor inadequate. If inventories are kept at a high level, higher interest and storage costs would be incurred; on the other hand, a low level of inventories may result in frequent interruption in the production schedule resulting in under utilization of capacity and lower sales. The objective of inventory management is therefore to determine and maintain the optimum level of investment in inventories which help in achieving the required objective.

First, emphasis should be normally placed on the economic order quantity model because it was seen to be in the best interest of manufacturing companies to maintain an optimal level of materials in store, the level that minimizes total cost of investment in inventory. To achieve this success- fully, different costs, which are associated with inventory, should be segregated and accumulated in such a way that EOQ can be easily determined. Secondly, in the analysis we also mentioned that there was a positive relationship between inventory and sales and between inventory and production cost. This does not imply that inventory automatically determines production costs or sales and vice-versa. However, it does show that inventory levels can be a useful indication of what level of sales to expect. It is thus recommended that the sales and marketing department of the company should pay closer attention to the growth pattern of inventory usage and incorporate it in sales forecasting technique.

References

Alade, Julius A.; Sharma, Dinesh K.; Sharma, Hari P, 2004 "*Role of supply chain management decisions in effective inventory control, Journal of Academy of Business and Economics* "

Autry, C. W., & Bobbitt, M., L. 2008 "*Supply chain security orientation: conceptual development and a proposed framework.*" International Journal of Logistics Management, 19(1), 42-64.

B.J. Grablowsky, 2005 *"Financial Management of Inventory"* International Journal of Production Economics, Volumes 93-94, Pages 239-252