



Effective Inventory Management Strategies for Cost Optimization and Demand Fulfilment

K. Saxena

Department of Operations and Supply Chain Management
Ghaziabad, India

R. Bansal

Department of Business Analytics and Operations
Faculty of Management Studies, Delhi, India

Received: 01 July 2025

Revised: 10 August 2025

Accepted: 01 September 2025

Abstract

Businesses are able to save money and better serve the demands of their customers when they have effective inventory management. There are a number of inventory management tactics that might be helpful in accomplishing this objective. Some of these strategies include reducing the amount of dead stock (for more detail, see the definition of dead stock) and using the reorder point calculation. One of the most important aspects of inventory management is the need to pay continual attention to stock counts.

Key words: Inventory, management, Google, demand, necessary, etc.

Introduction

The process of obtaining, holding, and selling inventory, which includes both raw materials (components) and completed items (products), is referred to as inventory management using a systematic manner. When it comes to the world of business, inventory management refers to the process of ensuring that the appropriate stock is kept at the appropriate quantities, in the appropriate location, at the appropriate time, and at the appropriate cost in addition to the appropriate pricing. Maintaining the storage of stock, monitoring the quantity of goods that is available for sale, and fulfilling orders are all factors that are included in inventory management, which is a component of your supply chain. Management of inventory also involves controlling and supervising purchases made by customers and suppliers. It is only natural that the exact meaning of inventory management for your firm would change



significantly depending on the kinds of items you sell and the distribution methods through which you sell them. However, so long as those fundamental components are there, you will have a strong base upon which to grow. Excel, Google Sheets, and other manual tools are often used by small and medium-sized companies (SMBs) in order to maintain information on inventory databases and to make choices regarding ordering.

- "Inventory is defined as those stocks that are used to support production, such as raw materials and work in process, supporting activities, such as maintenance, repair, and operating supplies, and finally, customer service in the form of finished goods and spare parts," the definition of inventory states.
- According to the Author of Operations Management, Lee J. Krajewski, "Inventory is created when the receipt of materials, parts, or finished goods exceeds their disbursement; it is depleted when their disbursement exceeds their receipt."
- Every company must have a significant amount of stock on hand as a resource. As a result of this, the organisation puts a high value on having a reliable inventory management system in place. When inventory management is not done properly, it may put a company's very existence in jeopardy. Because of this, there is a possibility that production downtime would increase, and if supplies are delayed, it would be very detrimental for consumers.

Decrease in Expenses One

- The workers are notified via efficient processes when it is time to place a new order for any particular supplier. This ensures that there are no goods in inventory that are out of stock, which avoids any action from being slowed down and provides for the most efficient use of storage space.
- The success of a corporation may be traced back to a single item in its inventory, and an inventory management system will always disclose which things are moving swiftly and which are remaining stagnant. On the basis of these statistics, a company can make adjustments to its production and sales.

Simplify the Working Procedures

- There are several advantages that might accrue to a company due to the simplification of a method. There has been a discernible reduction in the level of uncertainty in the work force. The learning curves for new members of the team will be more manageable.

ABC Classification, Advantages and Disadvantages of Inventory Classification

The ABC Classification

In every organisation that is involved in the manufacturing, selling, or trade of items, inventory is an unavoidable issue that must be dealt with. Raw Materials, Semi-Finished Goods, Finished Goods, and Spares are the several types of inventory that are kept on hand. It does not matter where the inventory is stored or in what form it is accessible; each individual item of inventory has an economic worth and is regarded as an asset of the organisation. There is a residual economic value associated to even scrap metal by itself. There is a possibility that the patterns of inventory keeping may change depending on the kind of company. While it is possible that the value of the inventory is very high in certain instances, it is also possible that the inventory is extremely high in terms of both the volume and the number of SKUs. The inventory may be physically processed at the production facilities or at a warehouse facility that is owned and operated by a third party. In the process of managing inventory, inventory controllers are often involved. The administration of inventory encompasses a number of essential domains. The primary responsibility of inventory controllers is to ensure that optimal inventory levels are maintained, as well as to establish order and replenishment schedules and amount requirements. They make it a point to always attempt to maintain optimal levels of inventory and balance it out in order to prevent either an excess of inventory or a lack of inventory, both of which may be detrimental to the company.

Benefits of Utilising the ABC Classification

- For the purpose of managing the full amount of inventory and assigning relative importance to the appropriate category, this form of categorisation of inventory is helpful. For example, things in the A Class are considered to be of great worth. Because of this, it is possible to keep a careful eye on the inventory of this category in order to guarantee that the inventory level is kept at the optimal levels. This is because any excess inventory may have a significant negative influence on the total value of the product.
- Identifying these stocks as high-value products and ensuring tight control in terms of process control, physical security, and audit frequency are all made easier with the assistance of a category item.
- It makes it easier for managers and inventory planners to keep correct records and to bring the attention of management to the problem at hand, which in turn makes it easier for these individuals to make decisions immediately.

- Items in the B Category: These may be assigned a lower priority, with a lower frequency of review and a lower level of control, provided that proper documentation and audit controls are in place.
- C Category Items: These items are able to be maintained using simple and fundamental records. It is possible for inventory numbers to be bigger with a minimal number of periodic assessments.
- On the other hand, Due to the fact that Inventory Classification does not take into account the rate at which SKUs are moved, it has the potential to mislead controllers.
- B and C Categories are sometimes overlooked, which may result in the accumulation of enormous stockpiles or make them vulnerable to loss, theft, lax record keeping, and other similar issues.

Conclusion

Within any company or organisation, all of the functions are interconnected and tied to one another, and they often overlap with one another. Certain essential components, such as the administration of the supply chain, logistics, and inventories, constitute the core of the transportation function of the organisation. As a result, marketing managers and financial controllers both place a significant amount of importance on these responsibilities. The management of inventory is a very significant role that not only affects the state of the supply chain but also has an effect on the financial health of the balance sheet. For the purpose of being able to fulfil its needs and avoiding excess or under inventory, which may have an effect on the financial statistics, every organisation makes it a point to always seek to maintain the optimal inventory. Inventory is constantly subject to change. The management of inventory necessitates the ongoing and meticulous assessment of both internal and external components, as well as the control of these factors via planning and review. In the majority of organisations, there is a distinct department or job function known as inventory planners. These individuals are responsible for regularly monitoring, controlling, and reviewing inventory, as well as interacting with the departments of production, procurement, and finance.

Reference

L. Ling, Supply chain management: concepts, techniques and practices enhancing the value through collaboration. NJ: World Scientific, 2007. 372 p.

M. Leseure, Key Concepts in Operations Management, 2010.



D.S. Plinere, A.N. Borisov, L. Ya. Aleksejeva, "Interaction of Software Agents in the Problem of Coordinating Orders," *Automatic Control and Computer Sciences*, 2015, vol. 49, no. 5, pp. 268–276.

D.C.U. Cadavid, C.C. Zuluaga, "A framework for decision support system in inventory management area," *Ninth LACCEI Latin American and Caribbean Conf., LACCEI'2011*, Aug. 3–5, 2011, Medellin, Colombia.

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.

Life cycle engineering [Online] Available: <http://www.lce.com/pdf/abcclassification.pdf>

ABC analysis (Inventory) By Joffrey Collignon, Joannes Vermorel, Feb. 2012

ABC Inventory Analysis using Excel. Posted on October 1st, 2014.