The Importance of Successful Inventory Management to Enterprises-A Case Study of Wal-Mart

Ruonan Lin

Zhejiang Wanli University, Ningbo City 315100, China

linruonan@126.com

Keywords: Inventory management; Importance; Methods; Wal-Mart

Abstract: Inventory management is an important part of internal control is the company achieve their business objectives, implementing the business policy and decision-making, maintaining security and integrity of current assets to ensure financial balance legal, accounting information authenticity of an internal self-coordination, control and supervision control system. As Current assets, its existence is bound to use up a lot of liquidity. Through the implementation of proper inventory management methods, to reduce the level of enterprises, the average amount of funds used to improve inventory turnover rate and total asset turnover, can ultimately improve the economic efficiency of enterprises. Based on the Wal-Mart Company, explaining the importance of successful inventory management for an enterprise is expounded.

1. What Is Inventory Management?

Inventory management refers to the process of ordering, storing, and using a company's inventory. These include the management of raw materials, components, and finished products, as well as warehousing and processing such items.

For companies with complex supply chains and manufacturing processes, balancing the risks of inventory gluts and shortages is especially difficult. To achieve these balances, firms have developed two major methods for inventory management: just-in-time and materials requirement planning: just-in-time (JIT) and materials requirement planning (MRP).

Some firms like financial services firms do not have physical inventory and so must rely on service process management.

2. Importance of inventory management

Inventory Management includes managing and controlling raw materials, stocks, finished goods, warehousing, storage and other aspects which help reach the product from production to distributor or retailer. Each organization regularly strives on efficient inventory management to uphold optimum inventory to be able to meet its necessities and avoid over or under inventory that can impact the monetary statistics of the firm.

Inventory is forever dynamic. A prerequisite of inventory management is steady and vigilant assessment of exterior and interior factors and control via planning and evaluation. Most of the businesses have an individual department of inventory planners who incessantly observe, control and evaluate inventory and interface with manufacturing, procurement and finance sections of the firm.

In a business or association, all the functions are interlinked and coupled to each other and are time and again overlapping. Some key features like supply chain management, logistic handling and inventory management form the spine of the business delivery function. Therefore, these functions are very significant to the managers.

3. Inventory Management Methods

Depending on the type of business or product being analyzed, a company will use various

  DOI: 10.25236/mfssr.2019.154

inventory management methods. Some of these management methods include just-in-time (JIT) manufacturing, materials requirement planning (MRP), economic order quantity (EOQ), and days sales of inventory (DSI).

3.1 Just-in-Time Management

Just-in-time (JIT) manufacturing originated in Japan in the 1960s and 1970s; Toyota Motor Corp. (TM) contributed the most to its development. The method allows companies to save significant amounts of money and reduce waste by keeping only the inventory they need to produce and sell products. This approach reduces storage and insurance costs, as well as the cost of liquidating or discarding excess inventory.

JIT inventory management can be risky. If demand unexpectedly spikes, the manufacturer may not be able to source the inventory it needs to meet that demand, damaging its reputation with customers and driving business toward competitors. Even the smallest delays can be problematic; if a key input does not arrive “just in time,” a bottleneck can result.

3.2 Materials Requirement Planning

The materials requirement planning (MRP) inventory management method is sales-forecast dependent, meaning that manufacturers must have accurate sales records to enable accurate planning of inventory needs and to communicate those needs with materials suppliers in a timely manner. For example, a ski manufacturer using an MRP inventory system might ensure that materials such as plastic, fiberglass, wood, and aluminum are in stock based on forecasted orders. Inability to accurately forecast sales and plan inventory acquisitions results in a manufacturer's inability to fulfill orders.

3.3 Economic Order Quantity

The economic order quantity (EOQ) model is used in inventory management by calculating the number of units a company should add to its inventory with each batch order to reduce the total costs of its inventory while assuming constant consumer demand. The costs of inventory in the model include holding and setup costs.

The EOQ model seeks to ensure that the right amount of inventory is ordered per batch so a company does not have to make orders too frequently and there is not an excess of inventory sitting on hand. It assumes that there is a trade-off between inventory holding costs and inventory setup costs, and total inventory costs are minimized when both setup costs and holding costs are minimized.

3.4 Days Sales of Inventory

Days sales of inventory (DSI) is a financial ratio that indicates the average time in days that a company takes to turn its inventory, including goods that are a work in progress, into sales.

DSI is also known as the average age of inventory, days inventory outstanding (DIO), days in inventory (DII), days sales in inventory or days inventory and is interpreted in multiple ways. Indicating the liquidity of the inventory, the figure represents how many days a company’s current stock of inventory will last. Generally, a lower DSI is preferred as it indicates a shorter duration to clear off the inventory, though the average DSI varies from one industry to another.

4. The successful example of inventory management--Wal-Mart

Walmart Inc.’s inventory management is one of the biggest contributors to the success of the multinational retail business. Considering the mammoth size of the company, effective and efficient inventory management is of critical importance in operational effectiveness. Walmart is known for cutting-edge technological applications for its inventory management aspect of operations. The company has perfected the art of innovating its inventory management methods and strategies. Thus, Walmart is an example of the benefits of advanced technology and innovation in optimizing inventory management performance. While there are a variety of other factors contributing to the

success of this business, advanced inventory management is one of the core organizational capabilities that enable Walmart's leadership in the global retail industry. Such leadership establishes the company's competitive advantages relative to firms like Target and Amazon in the retail market.

4.1 Walmart's Vendor-Managed Inventory Model

Walmart's success in managing its inventory is partly due to the effective implementation of the vendor-managed inventory model. In this model, suppliers access data from the company's information systems, they decide when to send additional goods to Walmart, while the company monitors and controls the actual transit of goods from warehouses to the stores. This strategy shifts some of the inventory control activities onto the side of the suppliers.

Walmart's vendor-managed inventory has the benefit of minimizing delays in the movement of inventory across the supply chain. This benefit is achieved because suppliers can directly access current data about the inventory of their goods at Walmart stores. Another beneficial effect of using the vendor-managed inventory model is the minimization of costs in inventory management activity. The company does not need to spend for extra personnel to manage each supplier's goods. Instead, this financial and human resource expense is directly passed on to Walmart's suppliers.

4.2 Just-in-Time Cross-Docking in Walmart's Inventory Management

Walmart uses different methods to manage its inventory. Just-in-time inventory is the application of the just-in-time (JIT) method to inventory management. This method involves measures and activities for the operational objective of minimizing storage and related costs. At Walmart, the just-in-time inventory method is applied in the form of cross-docking. In cross-docking, suppliers' trucks and the company's trucks meet at the company's warehouses or merchandise distribution centers. Goods are transferred from the suppliers' trucks directly to Walmart's trucks, which deliver the goods to the stores.

The main benefit of cross-docking at Walmart's warehouses is the minimization of inventory size. Fewer goods are stored at the warehouses. A smaller inventory is less costly to maintain. Also, cross-docking enables Walmart to quickly deliver goods to the stores. This condition enables the firm to rapidly respond to fluctuations in demand and related changes in the market. Thus, this method of inventory management supports Walmart's operational efficiency and business resilience.

4.3 Walmart's Measures of Inventory Performance

Considering the size of its business and the variety of products it offers, Walmart uses numerous variables as measures of inventory performance. The following measures are some of the most significant:

a. Inventory turnover
b. Stock-out rate
c. Inventory size

Inventory turnover is the rate at which Walmart's inventory is sold out and replenished. It is a measure of the cost of keeping each item in stock. A higher inventory turnover rate is less costly and more desirable for the company. The stock-out rate is the frequency at which Walmart's inventory becomes inadequate in satisfying demand. A lower stock-out rate is desirable. In addition, the company uses inventory size as a gauge of cost. As noted, the corporation spends less for a smaller inventory. These measures reflect the cost minimization objectives linked to Walmart's cost leadership generic competitive strategy, which requires low costs to maintain attractive low selling prices.

4.4 Managing Inventory across Walmart's Supply Chain

1) ABC Analysis. The Category A items in Walmart's inventory include the finished goods sold at its stores and operations equipment, such as information systems for supply chain management and inventory management. Items in this category are regularly monitored and recorded. The Category B items in Walmart's inventory are the other supplies or materials used for operations,

such as maintenance equipment and office furniture. These items are moderately monitored and have moderate recording accuracy. Category C involves the least monitored and recorded inventory items, such as janitorial supplies and office supplies like paper. This category has the least impact on the company's daily retail operations.

2) Inventory Information Systems. Walmart is known for its advanced information systems specifically designed to support international retail operations, including e-commerce operations. These information systems cover every area of the business. In inventory management, Walmart uses a system that allows suppliers to access data on the inventory levels of their products. This system supports the company's vendor-managed inventory model, which helps minimize operating costs and enables the business to offer low selling prices.

5. Financial Impact of Walmart's Inventory Management

Walmart's vendor-managed inventory model minimizes the cost of managing inventory because some of the cost is transferred to the suppliers. The combination of the finished goods inventory, transit inventory, buffer inventory, and anticipation inventory support the company's cost leadership generic strategy through cost minimization. Walmart's cross-docking as a form of the just-in-time inventory method also helps reduce inventory costs by minimizing inventory size. This combined approach supports the company's profitability and financial soundness.

References

[1] Abernathy, F. H., Dunlop, J. T., Hammond, J. H., & Weil, D. (2001). Control Your Inventory in a World of Lean Retailing. Harvard Business School.

[2] Agrawal, N., & Smith, S. A. (2013). Optimal inventory management for a retail chain with diverse store demands. European Journal of Operational Research, 225(3), 393-403.

[3] Dedeke, A., & Watson, N. (2008). Exploring Inventory Trends in Six U.S. Retail Segments. Harvard Business School.

[4] Saha, S., & Goyal, S. K. (2015). Supply chain coordination contracts with inventory level and retail price dependent demand. International Journal of Production Economics, 161, 140-152.

[5] Walmart Inc.'s E-commerce Website.