Inventory Management Techniques atSmall and Medium Sized Enterprises in India

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Abstract:
Inventory refers to the raw material, work in progress, finished goods, services, and products that an Indian SME keeps on hand for manufacturing and future sales in order to generate revenue. Inventory control is the power over the goods and services that are offered for sale. As the owner of a SME is aware, inventory is expensive for the business. Therefore, managing it well may boost income and lower the expense of carrying too much inventory, which will also improve sales.So, inventory management is very crucial for the business to run operation efficiently and maximize the profits. The paper focuses on the various techniques which can be used to keep efficient inventory management.

Keywords: Inventory Management, Techniques, SME's.

Introduction:

Small and medium sized businesses (Suppliers) rely heavily on OEMs' (Original Equipment Manufacturers) projection for their business. Small and medium-sized suppliers lack a system for foreseeing demand on their own. In today's highly competitive industrial market, businesses must not only consistently enhance their performance but also do it more quickly than their competitors. Small and medium-sized businesses (SMEs) play a key role in the industrial production of an economy of the nation and are essential to the competitiveness of the national economy in today's global economy. With practically all productivity improvement (PI) tools needing a working grasp of statistics, the Indian SME manager requires a straightforward and heuristic PI solution that caters to his specific demands.

The complexity of many production businesses' production processes rises as a result of their ongoing expansion and modification of their production portfolios in an effort to compete in today's market. Deshpande (2010) emphasises that systems are enormously complex not just because of the sheer volume of its constituent parts (materials, manufacturing resources, finished goods, etc.). Variability or uncertainty is anotherproblem that affects how complicated any system is. In the context of the production process, consumer demand volatility is particularly prevalent. Production and inventory management are highly challenging because of the aforementioned factors. In his study from an Indian industry sector, Sharif (2012) highlighted the demand-supply mismatch, which also results in significant losses and production issues. Rajeev (2010), who examined the impact of inventory management on economic performance, demonstrated the significance of the practice for Small and Medium-Sized (SMEs) manufacturing businesses. His research focused in particular on the very inventory-intensive machine tool industry in India. The findings demonstrated that inventory management has some real effects on returns to scale, capital productivity, and labour productivity in respondent organisations.

Despite their diversity, SMEs (mostly micro and small firms) sometimes lack the ability to compete with major corporations, particularly because their products are more expensive and take longer to supply. It is brought on by increased manufacturing and logistical expenses as well as a more complicated production process, all of which are particularly driven by greater demand fluctuation. MTO (Make-to-Order) does not always need to be effective in every situation. On the other side, with such intricate production processes, it is quite challenging to establish any minimum stock levels for finished goods.

Objectives

. As the study brought different functions of inventory management in light hence the following objectives are drawn in the study.

a. To study the inventory management techniques.
b. To study the inventory management for SMEs in India.

Research methodology

Secondary data is used to collect and analyse the data. Some observations of the authors are used to express the own contribution .Descriptive research is carried out.

Limitation

Secondary data only used for the study.

Discussion

The Micro Small and Medium Enterprises (MSMEs) industry makes a significant contribution to the nation's socioeconomic growth. Due to the sector's contribution to the GDP and exports of India, it has taken on a substantial amount of significance. The industry has also made significant contributions to the growth of entrepreneurship, particularly in India's semi-urban and rural areas.

The Micro, Small and Medium Enterprises (MSME) are divided into two types, namely Manufacturing Enterprises and Service Enterprises, in accordance with the terms of the Micro, Small & Medium Enterprises Development (MSMED) Act, 2006

Revised Classification applicable w.e.f 1st July 2020			
Composite Criteria: Investment in Plant & Machinery/equipment and Annual Turnover			
Classification	Micro	Small	Medium
Manufacturing Enterprises and Enterprises rendering Services	Investment in Plant and Machinery or Equipment: Not more than Rs.1 crore and Annual Turnover ; not more than Rs. 5 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.10 crore and Annual Turnover ; not more than Rs. 50 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.50 crore and Annual Turnover ; not more than Rs. 250 crore

Table 1.1 Source Ministry of Micro, Small & Medium Enterprises

"The number of MSMEs in India increased by a CAGR of 18.5% from 2019 to 2020.In FY21, the loan disbursals to MSMEs stood at Rs. 9.5 trillion (US$ 128.06 billion), a 40% increase compared with Rs. 6.8 trillion (US$ 91.66 billion) in FY20**."**[1]

Inventory Management Techniques

- Push Inventory System

  According to forecasts of client demand and ordering, the push inventory system comprises building or ordering inventory supply. At essence, the product is driven from the factory down, where it is "pushed" through the supply chain until it finally arrives in a store where customers may purchase it. This system must estimate purchase trends in order to calculate supply, and it is helped by specially created inventory management software, but there will inevitably be some inaccuracy because of the nature of the inventory system.The businesses are further divided into groups according to equipment investment and yearly sales.

  There are certain strategies to minimise this mistake to prevent over- or under-manufacturing of goods, which might result in a lower item value and a corresponding loss of money or the inability to meet consumer demand and should both be avoided.

  Due to the producers' distance from the end-user, there is a serious lack of visibility on product requirement with a push inventory system. However, it is feasible to predict the demand from season to season with the help of suitable inventory management software and data analytics.

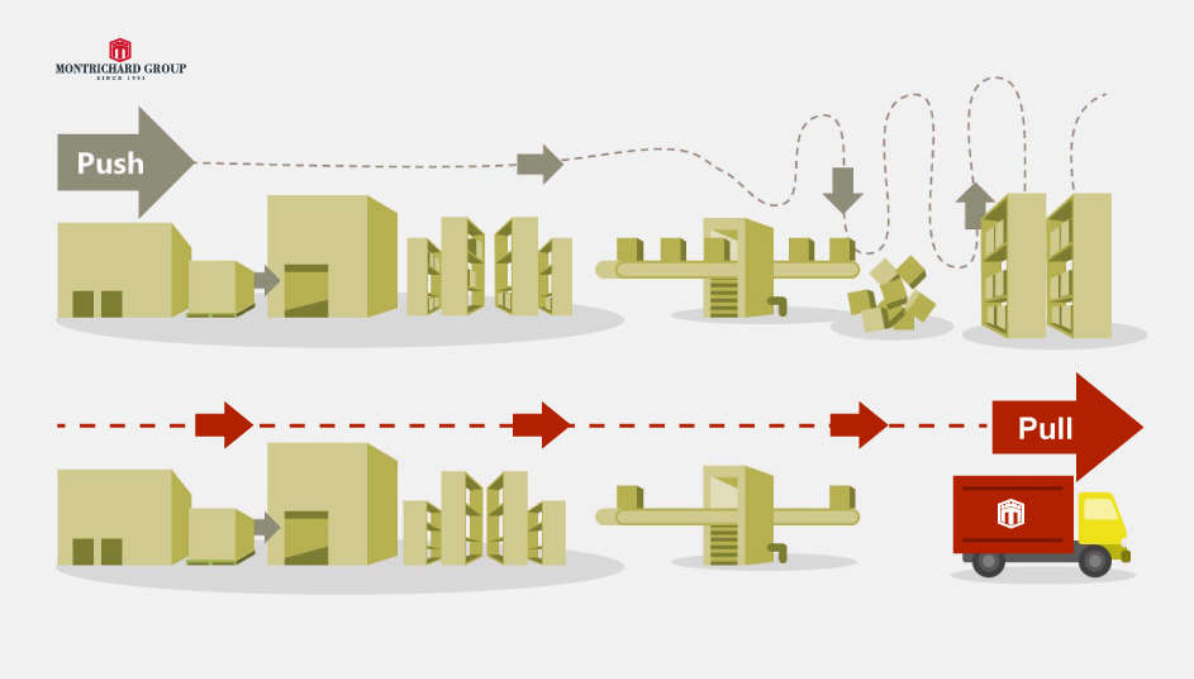
  The push inventory strategy has the advantage of often ensuring there is enough supply to meet projected demand, which helps prevent stock-out situations. However, there is still an enormous amount of supplies, which might result in high storage costs if demand drops suddenly.

- Pull Inventory System

  In the "bottom-up" operation of the pull inventory system, the end user places an order through theretailer, which then places an order with the distributor, who then places an order with the manufacturer, who then places an order with their suppliers (assuming all parties operated by this method).One of the greatest problems with a pull inventory system is that it takes some time for these orders to go up in the supply chain. As an order moves through the supply chain, the longer it takes to fulfill consumer demands, the longer the client must wait, which may lead to lower customer satisfaction.

  1.IBEF Report

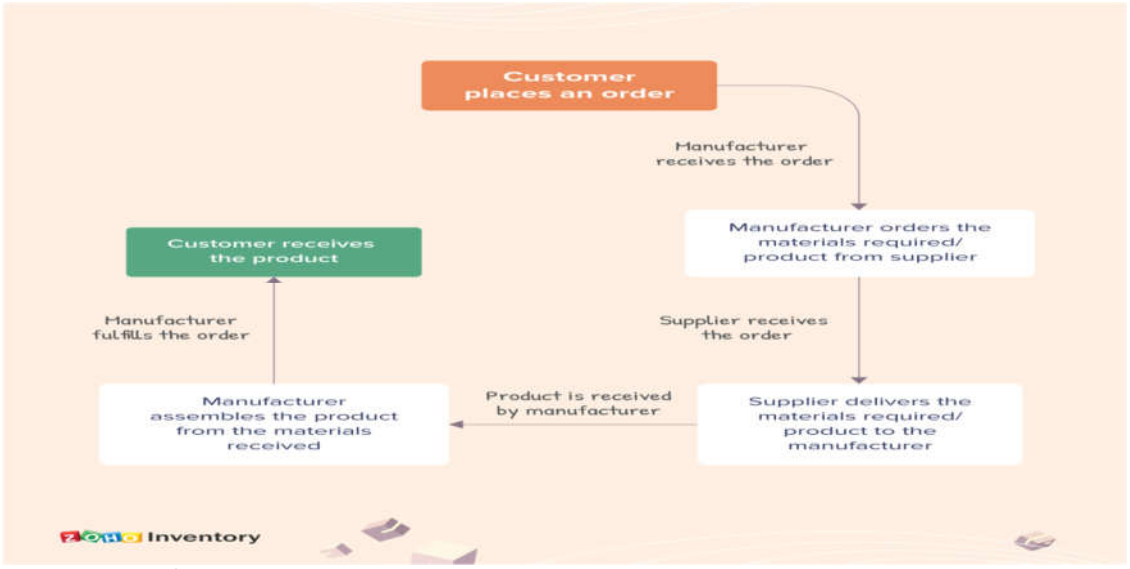
If the distributor has efficient inventory control, can estimate client demand reasonably well, or saves safety stock of product for unforeseen orders so that supply is regularly maintained, this risk can be reduced.
Even though simply ordering and producing as needed will save inventory costs, there is a higher chance of stock-outs as a result because this supply system is mostly reactive and unable to meet unforeseen demands on time. This inventory method has the important benefit of requiring no huge storage facilities, which saves even more money. All merchandise made or ordered is effectively already paid for by the client, which reduces the amount of firm capital held in stock.



Source: Google Images

- Just In Time

JIT, or just-in-time, is an inventory management technique in which supplies are only ordered when needed. This approach's primary goals are to lower the cost of keeping inventory and boost inventory turnover. In order to complete the entire process till delivery, just in time demands meticulous supply chain planning and the use of better software. This method boosts efficiency and reduces the possibility of error because each phase is closely monitored. A just-in-time approach prevents overabundance, which occurs once the market's supply of a good exceeds its demand and results in the buildup of unsalable stocks. These unsaleable items become dead stock in the inventory, which increases waste and takes up space. In a just-in-time system, you only order what you require, eliminating the possibility of building up unnecessary inventory. In a JIT approach, the manufacturer has total control over the demand-pull-based production process. They may immediately increase production of a product that is in high demand and decrease production of those that are in low demand in order to meet client demand. As a result, the JIT approach is adaptable and able to meet the demands of the constantly shifting market. For instance, Toyota waits until it receives an order before buying raw materials. Due to being able to maintain less inventory, the firm has been able to save expenses and swiftly adjust to changes in demand without having to worry about current inventory. Only necessary inventories are acquired under a JIT approach, necessitating minimal working capital for financing acquisition. Therefore, the business would get a good return on investment due to the lower amount of merchandise maintained in the inventory. The "right first time" notion, which refers to performing tasks correctly the first time, is used in just-in-time models to cut down on inspection and rework expenses. As a result, the business needs to invest less money, less money is needed to invest in fixing mistakes, and more money is made when an item is sold.



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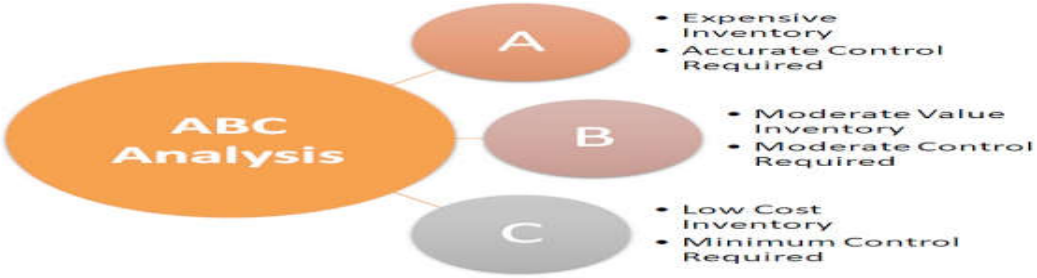
- ABC analysis:

The value of inventory items is calculated using the inventory management approach of ABC analysis based on their significance to the company. Inventory managers classify things according on how ABC prioritizes them based on demand, cost, and risk data. This enables business executives to comprehend which offerings are most essential to the financial performance of their company. According to sales volume or profitability, "Class A" items are the most crucial stock keeping units (SKUs), followed by "Class B" and "Class C" products. Some businesses could choose for a classification scheme that divides goods into more than just those three categories (A-F, for example).

The ABC analysis used for inventory management is distinct from the ABC analysis used for cost accounting,also known as activity-based costing. Activity-based costing is a manufacturing technique used by accountants to allocate indirect or overhead expenses, like as wages or utility costs, to goods and services.



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Conclusion:

Inventory management has a significant impact on a company's success, and it becomes much more crucial and challenging for SMEs when there are complicated production processes involved. Due consideration should be paid to the performance of SMEs because they are a key source of employment and economic growth in all developed nations. A business may be able to employ higher levels of inventory management practices as a result of its enhanced competitiveness since it is under pressure to consistently outperform its rivals and maintain its competitive position. On the other side, improved organisational performance gives a company more funding to use different cutting-edge inventory management strategies.

Recommendations:

Owners or managers of MSE manufacturing firms are expected to view inventor management practice as one core enterprise objective in order to improve their organization's overall performance while also providing quality customer service, high-quality products, cost savings, and the ability to meet changing market demands.

Different advantages and disadvantages of the push and pull systems should be taken into account. The hybrid system, which combines both the push and pulls methods depending on the product and demand, is an alternative option.

Understanding the product, its shelf life, the lead time for manufacturing, and demand are critical to deciding which system is ideal for your business. These factors must all be taken into account in order to optimize the process since they all affect the price and time of manufacturing and storage.
Today various software's are available for effective inventory management which can be well studied by SMES and accordingly they can implement the software in companies.

References

Small and Medium Business Development Chamber of India, 2011. *Empowering Indian SMEs for global competitiveness*. http://www.smechamberofindia.com/

Wortman, D.B., 1992. Managing capacity: getting the most from your firm's assets. *Industrial Engineering*, 24, 47–49

Wang, L., Study on the system optimization of inventory management of SME, IJCAI International Joint Conference on Artificial Intelligence, July 13-17, California, USA, pp. 413-416, 2009.

Teunter, R., Babai, M., & Syntetos, A. (2012). ABC Classification: Service Levels and Inventory Costs. Production and Operations Management, 19(3).

https://www.ibef.org/industry/msme

https://www.zoho.com/inventory/guides/what-is-just-in-time.html#:~:text=Time%3A%203%20minutes-,What%20is%20Just%2Din%2DTime%20(JIT)%3F,costs%20and%20increase%20inventory%20turnover.

https://blog.ziploan.in/sme-in-india-boost-inventory-management/

https://www.netsuite.com/portal/resource/articles/inventory-management/abc-inventory-analysis.shtml#:~:text=What%20Is%20ABC%20Analysis%20in,classes%20based%20on%20those%20criteria