

Ideation Phase

LITERATURE REVIEW

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Team ID	PNT2022TMID46684
Project Name	Project - Retail Store Stock Inventory Analytics
Maximum Marks	2 Marks

“Inventory management for retail companies”- Cinthya Vanessa Muñoz Macas, Jorge Andrés Espinoza Aguirre, Rodrigo Arcentales Carrión, Mario Peña

This article aims to present an extensive literature review concerning inventory control and management in the retail sector. First, the paper includes a systematic literature review regarding the Key Performance Indicators (KPIs) of inventory control and management in retail companies. Second, the main systems, methodologies, and tools used for inventory management are described. Finally, the current trends in inventory handling and management in retail companies are outlined. To accomplish the goals the study follows the Fink methodology. It consists of seven main tasks: (1) choosing research questions, (2) defining bibliographic or article databases, (3) selecting search terms, (4) applying practical screening criteria, (5) applying methodological screening criteria, (6) doing the review, and (7) synthesizing the results. This process involves in verifying the demand on stock by making use of the concept first in first out(FIFO) and Last in First out(LIFO) techniques in order to verify the demand basis of end user which helps to control the wastages in stock in inventory Management.

Q) What are the main indicators (KPIs) of inventory control and management in Retail companies?

Based on the literature review regarding indicators of inventory control and management within retail companies, 22 key aspects have been identified to consider when performing inventory management, which could play the role of performance indicators or performance within inventory control and management decisions. All the KPIs identified allow knowing the effectiveness of inventory control and management carried out within retail companies. Among them, the first ten are considered essential due to its higher frequency of employment, while the remaining 12 have a minimum frequency. The KPIs identified are: 1) actual inventory and its relationship with the company's information system, 2) inventory level, 3) shortage of scarcity, 4) product reordering, 5) product replenishment, 6) service level, 7) products availability, 8) excessive inventory, 9) items on the shelf, 10) income level – earnings, 11) preference and purchase decision, 12) response level, 13) lost items, 14) returns, 15) complexity and operational performance, 16) proper planning, 17) inventory balance, 18) sales data, 19) verification of the amounts received in stores, 20) incorrect scanning at the time of payment, 21) incorrect deliveries, and, 22) adaptive, flexible inventory.

Q) What are the systems, methodologies, and tools aimed at managing and optimizing inventory in Retail?

Through the literature review, the main systems, methods, and tools used for inventory management were identified. This study considered them as systems allowing better inventory control, management, and supply. Based on their focus areas, three groups were created: inventory records and localization, optimization, and the order quantity determination.

Q) What are the current trends in inventory handling and management in retail companies?

To define the current trends for inventory management in the retail industry, it is convenient to consider critical aspects that allow knowing the effectiveness of the proposed models employing the 22 KPIs presented above. These aspects are identified as key performance indicators of the inventory models. In the study carried out, 22 relevant indicators are established, 10 of them show a higher mention frequency within various studies analyzed. The importance of these indicators is given as a result of the analysis presented above, in which each indicator is displayed and shows its influence over adequate inventory management. Furthermore, these indicators will allow the organization to know the state of the inventory, as well as the model evaluation, which can be used to make continuous improvements to contribute to the business wellness. On the other hand, the current tendencies in inventory management are primarily focused on developing tools that enable retailers, product location control, loss detection, stock management, cost reduction, and service level improvement.

Q) How do you measure to see if you are successfully managing inventory

The proof is in the numbers when measuring the success rate of inventory management. After you have implemented new inventory management techniques, compare data and KPIs from before and after. Some seasonality and inventory metrics include stock outs, mis-stocks, inventory turnover ratio, dead stock and order cycle time. Have your level of mis-shipments, mis-picks or out-of-stocks decreased? What about dead stock? Have you eliminated the dead piles of inventory around the perimeter of the warehouse? If you can answer yes to these, you've successfully conducted inventory management. As a result, you may expect to see better customer reviews, improved customer loyalty and even a boost in Amazon Seller Rating Performance.

REFERENCES

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