

LITERATURE SURVEY

Inventory management for retail companies

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The correct management of inventories has become a fundamental pillar for achieving success in enterprises. In this context, this article aims to analyze and present an extensive literature concerning inventory management, containing multiple definitions and fundamental concepts for the retail sector. A systematic literature review was carried out to determine the main trends and indicators of inventory management in Small and Medium-sized Enterprises (SMEs). This research covers five years, between 2015 and 2019, focusing specifically on the retail sector. The primary outcomes of this study are the leading inventory management systems and models, the Key Performance Indicators (KPIs) for their correct management, and the benefits and challenges for choosing or adopting an efficient inventory control and management system. Findings indicate that SMEs do not invest resources in sophisticated systems; instead, a simple Enterprise Resource Planning (ERP) system or even programs such as Excel or manual inventories are mainly used. technologies have been developed over time for inventory management, going from basic manual reporting to an integrated information system (IS), which can help to “decide how and where orders should be fulfilled to improve service levels while decreasing total costs”. Moreover, these new functionalities can collaborate in the most effective handling of materials and better manage the cycle of purchase - reception - allocation in production.

A Case Study of Inventory Management System for an International Lifestyle Product Retailer in Bolivia

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Developing countries are characterized by trade imbalances with developed countries due to process inefficiencies, bureaucracy, and communication problems. This leads to longer lead times and supply uncertainty. Consequently, firms attempt to overcome the supply uncertainty by carrying unnecessary amounts of buffer stocks. The paper analyzed the inventory management system of an international lifestyle product retailer in Bolivia and found that, as the literature predicted, the firm showed no use of basic inventory control techniques. Particularly, it did not make data-driven decisions, lacked an effective inventory management system, or knew which products had higher consumer demand, and thus worked under a high level of supply uncertainty and inventory management illiteracy. Therefore, to reduce supply uncertainty, we developed a new inventory management system based on two strategies: (a) strategies to reduce demand uncertainty; and (b) strategies to reduce process uncertainty. Specifically, the paper implemented triple exponential smoothing for product demand forecasting, ABC segmentation to identify the most important products in the firm's portfolio, the newsvendor model to determine optimal inventory levels, powers-of-two policies, to optimize reorder times, and Turnover Based Metrics to arrange SKUs in the warehouse. Overall, the results suggest the significance of taking into account the country in which any firm operates.

Research paper on Inventory management system

International Research Journal of Engineering and Technology (IRJET)

Volume: 05 Issue: 04, Apr-2018

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The motivation of this paper is to create better understanding in redefining requirement of retailer for paper publication. Generating backup data is a critical process in a project for our shopkeeper. This work can be categorized as time consuming job and need high accuracy when placing the proper materials with its quantity. Moreover, the project scalability itself will increase the risk so is the processing time hence can make us loose the control when there is a lot of revision, like drop and insert, that being made. Since this is the first time we create the automation, there are so many requirements that might not defined properly. The purpose of this paper is to review and redefine the automation's requirements from basic like: What are their requirements? How can we fulfill the Shopkeeper's requirements? What is our limitation to fulfill those requirements? The proposed solution is the requirements from the shopkeeper to create backup inventory within limited time and in high accuracy makes us to come up with automation solution by using desktop. At this time, we think that this is the based solution. However, it might need some improvement in the future based on the lesson learned so is the new requirement from the shopkeeper. It's a straightforward desktop application in which the network to the immediate distribution center with the goal that information ought to be refreshed in store for the confirmation.

Inventory Management using Machine Learning

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This paper tells the plan of using artificial intelligence into inventory management.. The transitioning from the traditional ways of managing inventory, which is the direct result of the availability of the huge amounts of real-time data that are now routinely generated on the internet and through the interconnected world of enterprise software systems and smart products. Managers need to make effective use of this newly available data, by redesigning their inventory management process, to stay in the competition against several other E-commerce businesses. Optimum inventory should be maintained by all organization so that under inventory can be eliminated which disrupt the financial figures. Careful evaluation of internal and external factors through better planning can improve the status of inventory. Demand forecasting is a systematic process of anticipating the demand of a product or service offered by the organization in the future under a set of unpredictable and competitive forces. In this paper XGBoost regression model is used to perform demand predictions. XGBoost is a machine learning algorithm which uses decision trees. In prediction problems that have the data unstructured Neural networks outperform other prediction algorithms, but in our case the data is structured and tabulated, and decision tree algorithms are considered best for structured.

A Review of Inventory Management Research in Major Logistics Journals

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The purpose of this paper is to provide a review of inventory management articles published in major logistics outlets, identify themes from the literature and provide future direction for inventory management research to be published in logistics journals. Design/methodology/approach – Articles published in major logistics articles, beginning in 1976, which contribute to the inventory management literature are reviewed and cataloged. The articles are segmented based on major themes extracted from the literature as well as key assumptions made by the particular inventory management model. Findings – Two major themes are found to emerge from logistics research focused on inventory management. First, logistics researchers have focused considerable attention on integrating traditional logistics decisions, such as transportation and warehousing, with inventory management decisions, using traditional inventory control models. Second, logistics researchers have more recently focused on examining inventory management through collaborative models. Originality/value – This paper catalogs the inventory management articles published in the major logistics journals, facilitates the awareness and appreciation of such work, and stands to guide future inventory management research by highlighting gaps and unexplored topics in the extant literature.

A Review of Inventory Management System

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Inventory Management System is extremely beneficial to business owners, as they allow shops to properly store sales and purchase records. When inventory is mismanaged, it leads to dissatisfied consumers, slower sales, too much cash on hand, and warehouses. This inventory system reduces manual work, human mistake, and manual delays while simultaneously speeding up the process. This inventory management system will be able to track sales information as well as inventories. Inventory management system is a web application for Windows that focuses on inventory and sales clearance. It was created for Windows operating systems. The inventory management system has a number of features. This web application has logical tools for evaluating ideal inventory levels and selecting the appropriate replenishment strategies automatically. It also has capabilities like the ability to identify stock levels, compute reorder points automatically, and highlight potential stock-outs. This technique eliminates the risk of stock-outs of fast-moving goods by minimizing delays.