Literature Survey

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In recent years, the correct management of inventories has become a fundamental pillar for achieving success in enterprises. Unfortunately, studies suggesting the investment and adoption of advanced inventory management and control systems are not easy to find. 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). The 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.

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Today's challenging business environment, with unpredictable demand and volatility, requires a supply chain strategy that handles uncertainty and risks in the right way. Even though inventory models have been previously explored, this paper seeks to apply these concepts on a practical situation. This study involves the inventory replenishment problem, applying techniques that are mainly based on mathematical assumptions and modeling. The primary goal is to improve the retailer’s supply chain processes taking store differences when setting the various target stock levels. Through inventory review policy, picking piece implementation and minimum exposure definition, we were able not only to promote the inventory reduction as well as improve sales results. The inventory management theory from literature review was then

tested on a single case study regarding a particular department in one of the largest Latam retail chains.

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Supply chain management involves multiple and conflicting objectives. A multi-objective optimization procedure which permits a trade-off evaluation for an integrated location-inventory model is initially presented. In this paper, they proposed an integrated model to incorporate inventory control decisions - such as economic order quantity, safety stock and inventory replenishment decisions under vendor-managed inventory collaborative initiative - into typical facility location models, which are used to solve the distribution network design problem. This model includes elements of total cost, customer service and flexibility as its objectives. Moreover, a multiobjective evolutionary algorithm is developed to determine the optimal facility location portfolio in order to reach best compromise of these conflicting criteria. A hybrid evolutionary approach is proposed and its scenario analysis is implemented on a real large retail supply chain in Taiwan to investigate the model performance and to illustrate how parameter changes influence its output. Some preliminary results are described.

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As retail market becomes extensively competitive, the ability to optimize on serving business processes while satisfying customer expectations has never been more important. Therefore, managing and channelizing data to work towards customer delight as well as generate healthy profits is crucial to survive prosperously. In the case of big retail players internationally as well as in India, data or rather big data analytics is now being applied at every stage of the retail process - tracking emerging popular products, forecasting sales and future demand through predictive simulation, optimising product placements and offers via customer heat-mapping and many more. Alongside this, identifying the customers likely to be interested in particular product types based on their previous purchase behaviours, working out the best way to approach them through targeted marketing efforts and finally working out what to sell them next is what forms

the core of data analytics. This article is the outcome of a descriptive research on the past, present and future of retail industry and the application of business analytics in shaping appropriate marketing strategies.