LITERATURE SURVEY

FOR INVENTORY MANAGEMENT SYSTEM FOR RETAILERS

Name of the paper :   Inventory management for retail companies.

Published date   **:**   March,2021.

Author :

- Cinthiya vanessa monoz macas
- Andres Espinoza Aguirre
- Rodrigo arcentales
- Aarrionmario pena

Topic   **:**

Inventory management for retail companies: a literature review and current trends.

Pros :

They addressed almost 22 issues that retailers faced.

Cons:

All the software and methodologies they suggested were not cost effective and could not be used by small scale retailers.

Overview inference:

Systems , methodologies and tools focused on determining the order quantity.

The current trendies 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. To accomplish these requirements , many studies have been developed over the past five years, whose findings can be categorized into three different approaches. The first approach refers to the tools, protocols, and systems which allow retailers to keep track of their inventory location as well as inventory loss. Examples of tools are RFID, RAIN RFID, Bar Codes, and systems based on previous devices like a Smart shelf system. The second approach refers to algorithms and systems focused on inventory optimization.

LITERATURE SURVEY

FOR INVENTORY MANAGEMENT SYSTEM FOR RETAILERS

Name of the paper: Inventory decisions on the transportation system and carbon emissions under COVID-19 effects.

Published date: September, 2022.

Author :

- Abu hashan Md Mashuda
- Suja nMiah
- Yoef dar yantoc
- Ripon K.chakraborthy
- S.M. Mahmudulhasan
- Ming -lang tseng.

Topic :

Inventory decisions on the transportation system and carbon emissions under COVID-19 effects: a sensitivity analysis.

Pros :

This study considers product deterioration. time-dependent holding costs, price-dependent demands, and carbon emissions from vehicle operation and intends to establish a harmonious relationship among these attributes.

Cons :

This study failed to show how COVID-19 affects customers' purchases instead of the effects on the transportation system.

Over view inference:

The Threshold Accepting algorithm has been used to resolve a variety of optimization problems due to its robust optimization heuristic. The costs for the manufacturer implicate production costs, whereas the costs for the retailer implicate shortage, stockholding, fixed ordering, and buying costs. It is important for firms to define their decision variables aiming to increase their profit. The manufactures should define the prices related to large scale sales, and the retailers should be able to define their replenishment cycles and their prices as well.

LITERATURE SURVEY

FOR INVENTORY MANAGEMENT SYSTEM FOR RETAILERS

Name of the paper:

Two-stage inventory management with financing under demand updates.

Published year:

Febraury,2021.

Author:

- Tianyunli
- Weiguofang
- Melikebaykal-gursoy

Methodology :

This paper presents a recourse approach to solve the two-stage optimization problem and derive the optimal inventory or financing policies.

Pros :

This research incorporates the financial and operational decisions into demand updates. and brings new managerial results and insights.

Cons :

Due to the complexity of the objective function we do not have simple formulas for the optimal procurement policies we provide the complete analytical description of the optimal solutions.

Overview inference :

Differential Evolution algorithms are also presented in order to deal with the second level of the bi level matter, as an alternative to solve the second level of the bi-level problem, where both manufacturers and retailers should determine their correspondent price and also in the retailers case, determine the replenishment cycle. The main tendencies applied in retail industries are the IS, EOQ, JRP, VMI, OE Distribution, Threshold Accepting, and Differenta Evolution algorithms, MDP, AUD and IQD policies, and Fuzzy Inventory Management method.

LITERATURE SURVEY

FOR INVENTORY MANAGEMENT SYSTEM FOR RETAILERS

Name of the paper:

Internet of things for perishable inventory management systems: an application and managerial insights for micro, small and medium enterprises.

Published year:

2021.

Author :

- Pratik Maheshwari
- Sachin kamble
- Ashok pundir
- Amine belhadi
- Nelson oly ndubisi
- Sunil Tiwari.

Methodology:

The study aimed to investigate the impact of lot on existing operating parameters (holding cost, selling cost, deterioration rate, shortage cost, goodwill cost, unit purchase cost) and how it can increase the overall profit of retailers by reducing spoilage.

Pros:

we formulated and analyzed IoT implementation costs in the retailer warehouse.

 Cons:

They only focused on retailer benefits. They only considered deterministic demand rates with zero lead time..

Overview inference:

Fuzzy Inventory Managementis presented as an option for traditional probabilistic methods which work with inventory management incertitude. In order to define an optimal EOQ, the following variables are described as Fuzzy variables: backorder cost, holding cost, order cost, and demand. These variables are simulated between them by applying particle swarm optimization and genetic algorithms.

LITERATURE SURVEY

FOR INVENTORY MANAGEMENT SYSTEM FOR RETAILERS

Name of the paper:

Design and implementation of a computer based household inventory system.

Published year:

March,2021.

Author :

- Laff non stop
- Yonas kebede.

Methodology:

The research work embraces all activities of household inventory management valuation feasibility and liability but our study is narrowed down to the valuation of property as a way of bringing the work home.

Pros :

It is focus on valuation because the field area of household inventory is generated to acknowledge the importance of household inventory to individual and the society at large.

Cons :

It doesn't support the small scale industry which couldn't afford a computer.

Overview inference :

Retail companies have acquired significant importance within several countries due to their high economic contribution Therefore, the need to analyze their KPIs becomes highly significant, as well as their different systems, methodologies, and tools used within inventory management and optimization. From the aspects mentioned above, the man trends in inventory management within companies were defined. important indicators within inventory management that must be considered when retailers evaluate their stock. Among them, ten primary indicators were founded: inventory level, actual inventory and its relationship to the company's information system, shortage or shortage frequency, frequency of product reordering or replenishment, service level, replacement frequency, product availability, inventory in excess, number of items on the shelf and level of income or profit. These indicators allow the organization to know the state of the stock to be managed appropriately, and show an excellent service quality and product availablity image to the customer.