

LITERATURE SURVEY

INVENTORY MANAGEMENT SYSTEM FOR RETAILERS

Author Name: Nazar Sohail, Tariq Hussain Sheikh

Year of Publishing: 2018

Description:

Inventory management is a challenging problem area in supply chain management. Companies need to have inventories in warehouses in order to fulfil customer demand, meanwhile these inventories have holding costs and this is frozen fund that can be lost. Therefore, the task of inventory management is to find the quantity of inventories that will fulfil the demand, avoiding overstocks. This paper presents a case study for the steel manufacturing industry (Small Scale Industry) on inventory management. The relationship between the inventory management and company performance was determined based on inventory days and return on asset (ROA) analysis. The research found that company X had a few inventory problems such as unorganized inventory arrangement, large amount of inventory days / no cycle counting and no accurate records balance due to unskilled workers. The study also proved that there was a significant relationship between return on asset (ROA) and inventory days. This paper also provides recommendation to the company and for further research.

Author Name: Toopalli Sirisha, Dr. Nalla Bala Kalyan

Year of Publishing: 2022

Description:

Business motives are to produce, sell & make profit. Inventories are playing vital role in every business whether industrial unit of trading organization. Thus this study acquires utmost importance, inventory can be broadly defined as the stock of Goods, commodities or other economic resources they are stored or reserved at any given for future production. Research design adopted in this study is analytical. The study makes secondary data which is collected from the following sources such as Company's magazines, books, journals etc. The main objective of the study is to minimize the investment in inventories by exercising selective inventory control techniques, analyse the performance in inventory management in TIDC INDIA, to review the system of inventory model & re-order level of raw material, to find out the Economic order Quantity & to determine the optimum level of safety stock & to fix reorder point. Tools used in this study for analysis are always ABC, HML, Correlation, Safety stock, Trend analysis. The company should follow a delivery schedule for cutting tools. All the tools are purchased from outside, even though they are having sufficient facilities for

producing the same. From the study it is concluded that, sophisticated inventory control techniques are not followed by the company. The company is giving part of its raw materials to subcontractors for conversion. If they could implement and follow the inventory management techniques, they can enhance the profit with minimum cost.

Author Name: Darya Plinere, Arkady Borisov

Year of Publishing: 2015

Description:

Inventory management is a challenging problem area in supply chain management. Companies need to have inventories in warehouses in order to fulfil customer demand, meanwhile these inventories have holding costs and this is frozen fund that can be lost. Therefore, the task of inventory management is to find the quantity of inventories that will fulfil the demand, avoiding overstocks. This paper presents a case study for the assembling company on inventory management. It is proposed to use inventory management in order to decrease stock levels and to apply an agent system for automation of inventory management processes.

Author Name: Dave Piasecki

Year of Publishing: 2001

Description:

He focused on inventory model for calculating the optimal order quantity that used the Economic Order Quantity method. He points out that many companies are not using EOQ model because of poor results resulted from inaccurate data input. He says that EOQ is an accounting formula that determines the point at which the combination of order costs and inventory costs are the least. He high lights that EOQ method would not conflict with the JIT approach. He further elaborates the EOQ formula that includes the parameters such as annual usage in unit, order cost and carrying cost. Finally, he proposes several steps to follow in implementing the EOQ model. The limitation of this literature is that it does not elaborate further relationship between EOQ and JIT. It does not associate the inventory turns with the EOQ formula and fails to mention the profit gain with the quantity is calculated.

Author name: Cinthya Vanessa Munoz Macas and Jorge Andres Espinoza Aguirre

Year of publishing: 2021

Description:

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). 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.

Author name: Serhii Ziukov

Year of publishing: 2015

Description:

Inventories are raw materials, work-in-process goods and completely finished goods that are considered to be the portion of business's assets that are ready or will be ready for sale. Formulating a suitable inventory model is one of the major concerns for an industry. The earliest scientific inventory management researches date back to the second decade of the past century, but the interest in this scientific area is still great. Again considering the reliability of any process is an important feature in the research activities. Values of some factors are very hard to define or almost unreal. In such cases, fuzzy models of inventory management take an important place. This paper analyzes possible parameters of existing models of inventory control. An attempt is made to provide an up-to-date review of existing literature, concentrating on descriptions of the characteristics and types of inventory control models that have been developed.

Author name: Madishetti and kibona

Year of publishing: 2013

Description:

Found that a well designed and executed inventory management contributes positively to a small or medium-sized enterprises (SMEs) profitability. They studied the association between inventory conversion period and profitability and the impact of inventory management on SMEs profitability. They took a sample of 26 Tanzanian SMEs, and used the data from financial statements for the period 2006–2011. Regression analysis was adopted to determine the impact of inventory conversion period over gross operating profit. The results cleared out that significant negative linear relationship occurred between inventory conversion period and profitability.

Author name: Edwin Sitienei and Florence Memba

Year of publishing: 2015

Description:

Conducted a study on Effect of Inventory Management on profitability of Cement Manufacturing Companies in Kenya. The study concluded that Gross profit margin is negatively correlated with the inventory conversion period, increase in sales, which denotes the firm size enriches the firm's inventory levels, which pushes profits upwards due to optimal inventory levels. It is also noted that firms inventory systems must maintain an appropriate inventory levels to enhance profitability and reduce the inventory costs associated with holding excessive stock in warehouses.

Author name: Gulsen

Year of publishing: 2012

Description:

In this study he had been discovered a multiple parameter ABC (Always Better Control) analysis using fuzzy, c-means (FCM) clustering. It is not cost effective to establish an inventory management strategy for each individual stock keeping unit (SKU). ABC analysis is one of the most often used methods for classifying stock holding units (SKUs). The conventional method ranks stock keeping units (SKUs) in descending order of annual dollar consumption, which is the product of unit price and annual demand. The few stock keeping units (SKUs) with the greatest yearly dollar usage are in group A and should be examined the most; the stock keeping units (SKUs) with the lowest annual dollar usage are in group C and should be considered the least; and the other stock keeping units (SKUs) are in group B. We suggested fuzzy, c-means

(FCM) clustering to a multi-criteria ABC analysis issue in this work to assist managers in making better decisions under fuzzy conditions. The results suggest that the fuzzy, c-means (FCM) approach is a straightforward and adaptive solution for inventory management.

Author name: Harris

Year of publishing: 1913

Description:

The first mathematical inventory model is generally referred to as the Economic Order Quantity (EOQ) model which was developed by Harris in 1913. The first full length book attempts to explain how various extensions of EOQ can be used in practice is Raymond's. Further research works showed that the EOQ model appears to be quite insensitive to errors in the specification of the appropriate cost parameters and the estimation of demand. The importance of the EOQ model is not only from the historical point of view but also because many other models designed to cope with different situations have been based on this model. However, this mathematical modelling technique of inventory management had very little application at that time. Perhaps this was because the new conceptions always need a period of maturation during which details can be improved upon and the original claim about increased productivity and performance can be proven through the test of time.

Author name: Ouyang

Year of publishing: 2006

Description:

He introduced defective items into the JELS model. The study applies various modelling methods to manage the defective rate in an integrated vendor-buyer inventory model. Three cases are investigated: crisp defective rate, triangular fuzzy defective rate and statistic fuzzy defective rate. In these two fuzzy cases, the signed distance procedure is applied to estimate the joint total expected cost in a fuzzy sense. Yang presented a stylized model to find the optimal strategy for integrated vendor-buyer inventory model with fuzzy annual demand and fuzzy adjustable production rate (Yang, 2007). For the model, Signed distance's ranking method for fuzzy number is employed to find the estimation of the joint total expected annual cost in the fuzzy sense and the corresponding order quantity of the buyer derived accordingly.

Author name: Alderete

Year of publishing: 2013

Description:

Alderete presents an econometric model to determine whether an SME (Small and Medium Sized Enterprise)'s probability of outsourcing depends on their levels of innovation and information and communication technology use. The model predicts that the level of innovation of an SME will significantly influence its probability of outsourcing. Besides, it stresses the negative incidence of the information and communication technologies (ICT) access on the outsourcing decision.