LITERATURE SURVEY

Retail store stock inventory

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TITLE : Managing product stock keeping

AUTHOR : S.Sarifah Radiah Shariff

Customer purchase behavior naturally affects the quantity or the choice of products they purchase. As such, purchase dependencies can be assumed to be closely related to the association the items or products they purchased together at one particular time. This study focuses on the association of product being purchased within one transaction based on the transaction made by the customers in retail shops and a supermarket. The objective is to adopt the inventory model with purchase dependencies in a real world and finally to compare the effect of purchase dependencies in the product availability level. Primary data were obtained from 130 customer sales transactions in the retail shop and the supermarket over a 7- day period. In order to demonstrate the effect of purchase dependencies on the total inventory cost, we adapted a new inventory model that utilizes purchase dependence. Finally, the test for significance of the difference is applied to show the effect of incorporating purchase dependencies in the inventory model. The simulation results demonstrated that the extended inventory models which have considered purchase dependencies showed reduction in lost sales and lost profit as wellas total inventory cost.

AUTHOR : G Divya Jyothi

TITLE : Implementation of a store management system

In our day to day activities we are facing the problem like “out of stock” situation when we visit a super market or any other marts. Smart Store Management is designed to monitor the daily inventory, out-of-stock, sales take-up, and other important data available from stores or outlets. Empty shelves in the stores frustrate customers and lead to sales losses for manufacturers and retailers. Customers show little tolerance for these so called “out of stock situations”. This leads to a 6 to 24% loss in retailer revenues. The store management identifies and monitors items in the shelves and automatically alert retailers when it's time to restock. The manual process involving collecting data will be replaced by automation and companies can get data in real time with no manual intervention and encoding.

TITLE : Base-stock distributed inventory management

AUTHOR : Przemysław Ignaciuk

In the paper, the dynamics of goods distribution systems managed according to the continuous-review base-stock inventory policy are investigated. As opposed to the previous studies, which limit the scope to the fundamental serial and treelike settings, a multi-echelon mesh topology of interconnected actors (suppliers, distribution center, retailers) is considered. The exogenous, uncertain demand may be imposed on any node in the controlled system, not just conveniently selected end points. The stock replenishment orders are realized with nonnegligible delay. A state-space model to study the properties of base-stock policy is proposed. The choice of control system parameters for obtaining a high service level with reduced holding costs is discussed. The analytical findings are supported by numerical tests.