

ABSTRACT

Inventory replenishment is one of the most important factors that affect the stock level and the total cost of a product. This study focuses on the method of using the Economic Order Quantity (EOQ) technique for a multi-item reordering cycle. The purpose of this paper is to investigate and determine the optimal method for inventory replenishment, considering holding costs, ordering costs and product costs.

This paper applies the Economic Order Quantity (EOQ) and Economic Order Interval (EOI) techniques, with varying demand and constant lead time for the replenishment of multi item consumer products, using mathematical methods, in a case study of a retailer.

This paper attempts to contribute to a better understanding of inventory replenishment by comparing the performances of the current replenishment method to a proposed method, so as to identify whether and by how much the new system could deliver an improved inventory management performance.

The scope of this paper is to investigate regular local products, excluding special marketing activities such as promotions or new launch periods.