Determining the optimal policy between stockout and replenishment for deteriorating item in the integrated inventory model

饒忻,吳玫瑩,黃惠民
Information Management
Computer Science and Informatics
meiying@chu.edu.tw

Abstract

In a competitive market environment, it is important to consider the perspectives of both the buyer and supplier. The purpose of this study is to consider an integrated inventory model for a deteriorating item in a shortage environment and to develop an optimal joint total cost from the perspective of the buyer and the supplier. This model assumes that when there is a shortage, the buyer can either allow for stockout or replenishment. A numerical example of this model shows that the integrated approach results in an impressive cost reduction when compared with an independent decision. A sensitivity analysis is performed to compare the stockout and replenishment policies.

Keyword：Integrated inventory model, deteriorating item, optimal joint total cost, stockout and replenishment policies.