Integrated Inventory Management for Seasonal Demand Items: A Model Considering Deterioration and Shortages

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ABSTRACT

In this paper, we considered an inventory model for a seasonal items demand rate with a linear deterioration rate and Shortages allowed with partially backlogged. The model is solved for a finite time horizon. The goal of this study is to elevate the literature on inventory and seasonal demand patterns to new levels. This paper can be applied in many realistic situations. The purpose of this study is to optimize the overall cost of the system and to find out the optimal ordering quantity. A sensitivity analysis of several associated parameters is also mentioned, along with a numerical illustration that describes the model and its key aspects.

Keywords: Seasonal items demand rate, Deterioration rate, Partially Backlogging

How to Cite