A Supply Chain Production Inventory Model for Deteriorating Product with Stock Dependent Demand under Inflationary Environment and Partial Backlogging

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Abstract

In this paper we have developed a two echelon supply chain production inventory model for deteriorating products having stock dependent demand under inflationary environment. This model is developed for finite time horizon. The shortages are allowed and partially backlogged. To make this study close to reality the production rate is assumed to be a function of demand rate. A numerical example and sensitivity analysis with respect to different associated parameter is also presented to illustrate the study.

References


18. Datta T. K., and Pal A. K., (1991), Effects on inflation and time value of money on an inventory model with linear time dependent demand rate and shortages, European Journal of
Operational Research, 52, 326–333.

**Index Terms**

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**Keywords**

Deterioration, Inflation, Inventory, Stock dependent demand, Demand dependent production, Shortages, Partial backlogging