



International Journal of Systems Science >

Volume 37, 2006 - [Issue 1](#)

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Inventory model for deteriorating items and time value of money for a finite time horizon under the permissible delay in payments

N. H. Shah

Pages 9-15 | Received 15 Apr 2002, Accepted 30 Sep 2005, Published online: 24 Feb 2007

Cite this article <https://doi.org/10.1080/00207720500404334>

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Abstract

In this article, an inventory model is derived by assuming constant rate of deterioration of units in an inventory, time value of money under the conditions of permissible delay in payments. The optimal replenishments and fraction of cycle time are decision variables to minimize the present value of inventory cost over a finite planning horizon. The sensitivity analysis is carried out by a numerical example.

Keywords:

Economic order quantity (EOQ)

Deterioration

Time value of money

Permissible delay in payments

Related Research Data

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Source: European Journal of Operational Research

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