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An EOQ model with delay in payments and time varying deterioration rate. (English)

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Summary: This article deals with an EOQ (Economic Order Quantity) model for finite replenishment rate where demand and deterioration rate are both time-dependent. In this model, the retailers are allowed a trade-credit offer by the suppliers to buy more items with different discount rates on the purchasing costs. During the credit period, the retailers can earn more by selling their products. The interest on purchasing cost is charged for the delay of payment by the retailers. Some of the items may deteriorate in the course of time. In this regard, the author develops an EOQ model for time varying deterioration rate. The profit function of the model is maximized. Finally, a numerical example and graphical illustrations are used to illustrate the model.

MSC:

90B05 Inventory, storage, reservoirs

Cited in **56** Documents

Keywords:

inventory; time-varying deterioration; time-varying demand; delay in payments

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