

## **EFFECTS OF INFLATION AND TRADE CREDIT POLICY ON AN INVENTORY MODEL WITH DETERIORATING AND AMELIORATING ITEMS UNDER EXPONENTIALLY INCREASING DEMAND AND PARTIAL BACKLOGGING**

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### **ABSTRACT**

*Inflation plays an important role on the traditional economic order quantity model. Any marketing policy depends on inflation due to customer demand and availability of the goods. The present paper deals with an inventory model under inflation, time-value of money and trade credit policy for deteriorating and ameliorating items over a fixed planning horizon. This model is also developed for determining the ordering quantity under the circumstance of time dependent exponentially increasing demand. Shortages are allowed which are partially backlogged. Finally, two examples are given to illustrate the model and the effects of inflation and trade credit policy are also discussed in the present model.*

**KEYWORDS:** *Inventory, Deteriorating, Ameliorating, Inflation, Time-Value of Money, Trade Credit, Exponential Demand and Partial Backlogging*

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