FUZZY DEMAND OVER LEAD TIME IN CONTINUOUS REVIEW INVENTORY MODEL

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ABSTRACT

In the traditional continuous review reorder point problems, probability theory has been wildly employed to deal with uncertain cases. In most situations, the decision maker is assumed to be aware of the probability distribution of uncertainty while the probability theory is applied, However, in practical applications, this is seldom the case. In the most situations, the uncertainty is estimated within a certain interval without any knowledge of a probability distribution within the interval. This investigation introduces the application of fuzzy sets theory to the continuous review reorder point problems. It is assumed that uncertainties may appear in the demand over lead time and in holding costs where decision-making is characterized by the lack of precise future estimates of the uncertain information. The minimized possible total cost is obtained by the corresponding reorder point and quantity that should be ordered. The computational aspects of the fuzzy models and their interpretations are illustrated by examples.

Keywords : continuous review reorder point problems ; reorder point ; order quantity ; fuzzy set theory

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