ON LEAD TIME MANAGEMENT IN INVENTORY MODELS

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Summary

Most of the literature dealing with inventory problems assume lead time as prescribed whether deterministic or probabilistic. In certain cases lead time can be reduced but at an added cost. By reducing lead time, customer service and responsiveness to production schedule changes can be improved and reduction in safety stocks can be achieved. In this paper we present two models which can be used to determine the optimal length of lead time and order quantity that minimizes the total inventory expected cost. The first model is an extension of a model proposed in the literature. In the second model, a functional form relating lead time cost to lead time duration which is more flexible from implementation point of view is proposed. Numerical examples are presented to illustrate the procedures developed.

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