

The optimum ordering policy for a dynamic inventory model with discrete demand

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Abstract

We study an economic order quantity of the standard example in an inventory problem of multi-period under the assumption that the demand is a discrete random variable. There are also some results how to find an optimal policy in examples with discrete demand. It is an application of analyses of the probabilistic inventory model that the authors construct using the theory of the dynamic programming.

Keywords : Probabilistic inventory problem, dynamic programming, discrete demand.

1. Introduction

Mathematical inventory models have been studied in [2], [3] and [4] in which we assumed the demand is a continuous random variable. Various properties of an optimum policy in its inventory systems are obtained and it is attempted to ensure simple treatments on an optimum policy of a multi-period inventory system provided we know the cost function of its single period problem. There are some examples in [2] and [4] that follow the dynamic inventory systems and for its analysis we

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Journal of Statistics & Management Systems

Vol. 9 (2006), No. 1, pp. 225–242

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