

A Note on the EPQ Model with Shortages and Variable Lead Time

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Abstract

The classical optimization techniques are often used to derive and to assert the optimal solution for the well-known inventory models such as the economic order/production quantity (EOQ/EPQ) models. Recently, a new approach, without reference to the use of derivatives but with algebraic derivation, is presented to solve the above deterministic EOQ/EPQ models with/without shortages. To widen the application of this approach, this paper considers the variable lead-time EPQ model with shortages. We show that the aforementioned approach can be applied to solve not only the deterministic case but also the probabilistic case considered in this article.

Keywords: Inventory, EPQ, Variable Lead-Time, Backorders.