

A complete solution procedure for the economic order quantity under conditions of a one-time-only extended permissible delay period in payments from the viewpoint of logic

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Abstract

Goyal and Chang [Asia-Pacific Journal of Operational Research 25 (2008) 267-277] establish an appropriate model for a customer to determine its optimal special order quantity when the supplier offers a special extended permissible delay for one time only during a specified period. They then develop two theorems for a customer to find the optimal special order quantity. This paper not only indicates that the processes of proofs of both theorems discussed in Goyal and Chang (2008) have shortcomings from the viewpoint of logic but also presents complete proofs for Goyal and Chang (2008) to remove those shortcomings.

Keywords: *Inventory; payment delay; special order quantity.*

1. Introduction

Recently, a number of researchers discussed the economic order (production) quantity EOQ (EPQ) models with/without shortage derived algebraically. They use an algebraic approach to find the optimal solutions

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