Impact of Two Levels of Trade Credit Financing on Economic Ordering Policy for New Products

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Abstract

In this era of constant change and innovation there is steady introduction of new products into the market. So, it becomes vital to discuss the inventory management of new products. Moreover, the inventory management of new products becomes more crucial when there is association of marketing parameters as well as different kinds of promotional efforts. This paper develops a mathematical model where demand follows innovation diffusion process and is governed by the innovation effect as well as the imitation effect. The case of permissible delay in payments has been incorporated into this model where the supplier offers credit period to the retailer and the retailer also offers credit period to the customer. The potential market size is dependent upon the credit period offered by the retailer to the customer. A numerical example followed by observations with sensitivity analysis of the optimal solution with respect to different parameters of the system has been performed to illustrate the effectiveness of the model.

Keywords: Inventory, EOQ, Innovation diffusion, Coefficient of innovation, Coefficient of imitation, Potential market size, Permissible delay in payments.

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