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An Inventory Model with Stock-Dependent Demand in Response to a Temporary Sale Price

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Abstract

In economic order quantity models, it is often assumed that the demand rate and the unit purchase cost are constant. Such assumptions are usually not fulfilled in practice. The phenomenon that the supplier may reduce its sale price temporarily to stimulate demand is very common in the market. In this paper, the temporary sale price and stock-dependent demand rate used in conjunction with the economic order quantity model are the focus of discussion. Numerical examples are presented to illustrate the model.

Keywords: EOQ, Temporary Sale Price, Stock-Dependent Demand.