Abstract

Supply chain management is a crucial task of managing large organizations. In a decentralized supply chain each member focuses on maximizing his own profit. As a result of it, the conflict between the manufacturer and the retailers will arise. To avoid this sort of situations, coordination model strike a balancing between the profit of manufacturers and retailers. This paper investigates a two echelon supply chain system which consisting of one manufacturer and multiple retailers. Using the mathematical modeling a coordination model which maximizes the total profit is developed and analyzed for deteriorating items. The optimal pricing and ordering policies of the model are also derived. A sensitivity analysis with respect to the parameters and costs is also presented. This model lower down the total cost of supply chain and increases the general profit. It also improves cooperation for both manufacturer and retailer.

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