

# **Supply Chain Coordination for a Deteriorating Item with Stock and Price Dependent Demand under Revenue Sharing Contract**

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## **Abstract:**

This paper deals with an integrated single-manufacturer single-retailer supply chain model for a single item. The market demand is assumed to be dependent on both on-hand stock and price and the manufacturer and retailer are in an agreement of lot-for-lot policy. The proposed model is developed and analyzed under the contract that the retailer offers the manufacturer a percentage of revenue he generates by selling a lot. We also determine optimal policies for both decentralized and centralized coordination systems. A comparison of these policies is made with a numerical example. Sensitivity analysis is performed to examine the stability of the solution.