

**FUZZY APPROACH IN DETERMINATION OF EOQ IN A TWO
LEVEL SUPPLY CHAIN WITH TRANSPORTATION COST AND
COMPARISON OF TOTAL COST IN CENTRALIZED AND
DECENTRALIZED DECISIONS USING FUZZY RANKING
METHOD**

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Abstract

In this paper we determine the optimal ordering policy in a two level supply chain in which transportation cost from the warehouse to the retailer is also considered apart from ordering and holding costs in the total system cost. Shortages are not allowed neither at the retailer nor at the warehouse. Demand, ordering and holding cost of warehouse and retailer are taken as triangular fuzzy numbers. Graded mean integration representation method is used for defuzzification of the total cost. The total system costs of centralized and decentralized cases are compared using fuzzy ranking methods given by Chen and Chen.

Key Words : *Economic Order Quantity (EOQ), Supply chain, Transportation cost, Triangular fuzzy number, Defuzzification, Fuzzy ranking method.*

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