On The Economic Order Quantity Model With Transportation Costs

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ABSTRACT: We consider an economic order quantity type model with unit out-of-pocket holding costs, unit opportunity costs of holding, fixed ordering costs and general transportation costs. For these models, we analyze the associated optimization problem and derive an easy procedure for determining a bounded interval containing the optimal cycle length. Also for a special class of transportation functions, like the carload discount schedule, we specialize these results and give fast and easy algorithms to calculate the optimal lot size and the corresponding optimal order-up-to-level.

Keywords: EOQ-type model; transportation cost function; upper bounds; exact solution.