

Supplier Selection by Considering Cost and Reliability

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Abstract : Supplier selection problem is one of the important issues of supply chain problems. Two categories of methodologies include qualitative and quantitative approaches which can be applied to supplier selection problems. However, due to the complexities of the problem and lacking of reliable and quantitative data, qualitative approaches are more than quantitative approaches. This study considers operational cost and supplier's reliability factor and solves the problem by using a quantitative approach. A mixed integer programming model is the primary analytic tool. Analyses of different scenarios with variable cost and reliability structures show that the effectiveness of this approach to the supplier selection problem.

Keywords : mixed integer programming, quantitative approach, supplier's reliability, supplier selection

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