MODELLING STOCHASTIC MULTI-OBJECTIVE SUPPLIER SELECTION PROBLEM (SMOSSP)

S.P. Singh, Department of Management Studies, Indian Institute of Technology, Delhi, India

ABSTRACT

Business organisations have to execute most of the decisions under uncertain environment such as selecting best suppliers for timely delivery of good quality parts at minimum cost in the presence of uncertain demand and lead time. The present work is an attempt to model Stochastic Multi-objective Supplier Selection Problem (SMoSSP) using chance constraint approach. The proposed SMoSSP considers operational risks involving uncertainties of supplier's capacity, product demand, transportation and variable costs and lead time probability distributions. The SMoSSP is solved and validated for randomly generated data using LINGO. An illustrative example is presented to demonstrate SMoSSP.

Keywords: *Suppler selection problem, stochastic model, chance constraint*