Fuzzy Optimization of Automobile Supply Chain Network of Considering Risks

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Abstract	In this paper, an optimization model of automobile supply chain network with risks under fuzzy price is put forward. The supply chain network is composed of component suppliers, plants, and distribution centers. The total costs of automobile supply chain consist of variable costs, fixed costs, and transportation costs. The objective of this study is to minimize the risks of total profits. In order to deal with this model, this paper puts forward an approximation method to transform a continuous fuzzy problem into discrete fuzzy problem. The model is solved using Cplex 12.6. The results show that Cplex 12.6 can perfectly solve this model, the expected value and lower semi-variance of total profits converge with the increasing number of discretization points, the structure of automobile supply chain network keeps unchanged with the increasing number of discretization points.
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