عنوان مقاله:

Design of a reliable supply chain network with responsiveness considerations under uncertainty: case study of an Iranian tire manufacturer

محل انتشار:

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خلاصه مقاله:

This paper proposes a bi-objective reliable supply chain network design that immunizes the network against different sources of uncertainties. In this regard, scenario based stochastic programming method is applied to model different disruption scenarios affecting accurate performance of network stages. Also, reliable and unreliable facilities are suggested for lessening vulnerability of network against disruptions. To maximize responsiveness of the network, maximal covering concept is applied aside with a newfacility reliability measuring method. To achieve to the noted aims, total expected costs of network design is minimized as well as maximizing responsiveness of facilities. Also, a possibilistic flexible programming method is suggested to cope with uncertainty of parameters and flexibility of constraints. The proposed method is capable of controlling risk-aversion of output decisions based on opinion company decision makers. Finally, the model is solved based on the derived from real case study of tire manufacturing and output results are analysed that show applicability and effectiveness of the extended network design model.

کلمات کلیدی:

supply chain; reliable; responsiveness; uncertainty; maximal covering

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