

Development model for supply chain network design by demand uncertainty and mode selection

ABSTRACT

It is necessary to consider the impact of demand uncertainty to model the comprehensive approach for supply chain network design. This paper presents four echelons, multiple commodity, and strategic–tactical model for designing supply chain network. Uncertain demand, transportation mode selection with lead time configuration has been considered. A numerical example has been implemented to verify the applicability of model. Finally, the simulation results and sensitivity analysis confirm that the proposed developed model is a suitable decision framework for designing the supply chain network.

Keyword: Supply chain network design; Mode selection; Demand uncertainty