

عنوان مقاله:

Solving a Multi-Item Supply Chain Network Problem by Three Meta-heuristic Algorithms

محل انتشار:

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خلاصه مقاله:

The supply chain network design not only assists organizations production process (e.g., plan, control and execute a product's flow) but also ensure what is the growing need for companies in a longterm. This paper develops a three-echelon supply chain network problem including multiple plants, multiple distributors, and multiple retailers with a multi-mode demand satisfaction policy inside of production planning and maintenance. The problem is formulated as a mixed-integer linear programming model. Because of its NP-hardness, three meta-heuristic algorithms (i.e., tabu search, harmony search and genetic algorithm) are used to solve the given problem. Also, the Taguchi method is used to choose the best levels of the parameters of the proposed meta-heuristic algorithms. The results show that HS has a better solution quality than two other algorithms.

کلمات کلیدی:

Supply chain network design, Multi-mode demand, Tabu search, Harmony search, Genetic Algorithm

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