

عنوان مقاله:

A Multi-objective Evolutionary Approach for Integrated Production- Distribution Planning Problem in a Supply Chain Network

محل انتشار:

دوفصلنامه بهینه سازی در مهندسی صنایع، دوره 7، شماره 14 (سال: 1392)

تعداد صفحات اصل مقاله: 14

نویسندگان:

Keyvan Sarrafha - MSc, Young Researchers and Elite Club, Qazvin Branch, Islamic Azad University, Qazvin, Iran

Abolfazl Kazemi - Assistant Professor, Faculty of Industrial and Mechanical Engineering, Qazvin Branch, Islamic Azad University, Qazvin, Iran

Alireza Alinezhad - Assistant Professor, Faculty of Industrial and Mechanical Engineering, Qazvin Branch, Islamic Azad University, Qazvin, Iran

خلاصه مقاله:

Integrated production-distribution planning (PDP) is one of the most important approaches in supply chain networks. We consider a supply chain network (SCN) consisting of multi suppliers, plants, distribution centers (DCs), and retailers. A bi-objective mixed integer linear programming model for integrating production-distribution designed here aim to simultaneously minimize total net costs in supply chain and transfer time of products for retailers. From different terms of evolutionary computations, this paper proposes a Pareto-based metaheuristic algorithm called multi-objective simulated annealing (MOSA) to solve the problem. To validate the results obtained, a popular algorithm, namely non-dominated sorting genetic algorithm (NSGA-II) is utilized as well. Since the solution-quality of proposed metaheuristic algorithm severely depends on their parameters, the Taguchi method is utilized to calibrate the parameters of the proposed algorithm. Finally, in order to probe the validity of the proposed model, a numerical example is solved and conclusions are discussed. Keywords: Supply chain network (SCN), Integrated production-distribution planning (PDP), Multi-objective simulated annealing (MOSA).

کلمات کلیدی:

Supply chain network (SCN), Integrated production-distribution planning (PDP), Multi-objective simulated annealing (MOSA), Non-dominated sorting genetic algorithm (NSGA-II), Taguchi method

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/790974>

