عنوان مقاله:

Evaluation of Bi-objective Scheduling Problems by FDH, Distance and Triangle Methods

محل انتشار:

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خلاصه مقاله:

In this paper, two methods named distance and triangle methods are extended to evaluate the quality of approximation of the Pareto set from solving bi-objective problems. In order to use evaluation methods, a bi-objective problem is needed to define. It is considered the problem of scheduling jobs in a hybrid flow shop environment with sequence-dependent setup times and the objectives of minimizing both the makespan and the total tardiness. The bi-objective genetic algorithm in literature is applied to solve this problem belongs to NP-hard class. In the structure of algorithm, 3 and 4 alternatives for dispatching rules and neighborhood search structure have been introduced respectively. Therefore, twelve algorithms are derived from a combination of dispatching rules and neighborhood search structures. After the execution of algorithms, efficient sets are compared through several evaluation methods. Computational results show that the FIFO rule is the best alternative for the dispatching rule in order to find the job sequence for the second to end stages.

کلمات کلیدی:

Data Envelopment Analysis, Distance method, Triangle method, Bi-objective problem