

عنوان مقاله:

The voting linear assignment method for determining priority and weights in solving MADM problems

محل انتشار:

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خلاصه مقاله:

Linear Assignment (LAM) is one of the Multi-Attribute Decision Making (MADM) methods that uses integer programming models in the solution process. In this method, only the final priority of the alternatives is determined and the distance between the alternatives is not clear. The purpose of this paper is to modify this method so that instead of the final priority of the alternatives, the final weight of the alternatives is presented. This is done using a linear programming model of Data Envelopment Analysis (DEA). In this paper, we propose a hybrid MADM-DEA method called Linear Assignment Voting (VLAM). The new method is explained with a numerical example. The method will then be implemented on a problem in the real world to demonstrate the application of the method. In this case study, VLAM demonstrates the prioritization of models proposed by experts for the purchase of excavators in a road construction company. Also, based on the results of this method, the weight of the first, second and third priorities are ۰.۳۹, ۰.۳۵ and ۰.۲۶, respectively. These results increase the decision maker's power in making the final decision and choice.

کلمات کلیدی:

Decision support system, Multi-Attribute Decision Making (MADM), Linear Assignment Method (LAM), Data envelopment analysis (DEA), preferential voting

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