

عنوان مقاله:

Sensitivity Analysis of TOPSIS Technique: The Results of Change in the Weight of One Attribute on the Final Ranking of Alternatives

محل انتشار:

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خلاصه مقاله:

Most of data in Multi-attribute decision making (MADM) problems are changeable rather than constant and stable. Therefore, sensitivity analysis after problem solving can effectively contribute to making accurate decisions. In this paper, we offer a new method for sensitivity analysis in multi-attribute decision making problems in which if the weights of one attribute changes, then we can determine changes in the results of the problem. These changes involve changes in the weight of other attributes and the change in the final rank of alternatives. This analysis was conducted for Technique for order-preference by similarity to ideal solution (TOPSIS) technique, one of the most frequently used multi-attribute decision making techniques, and the formulas were obtained. The paper continues with a numerical example and at last conclusions and suggestions for future researches are offered

کلمات کلیدی:

Multi-attribute decision making (MADM), TOPSIS technique, Sensitivity analysis

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