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Decision Aiding

Compromise solution by MCDM methods: A comparative analysis of VIKOR and TOPSIS

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Abstract

The multiple criteria decision making (MCDM) methods VIKOR and TOPSIS are based on an aggregating function representing ‘‘closeness to the ideal’’, which originated in the compromise programming method. In VIKOR linear normalization and in TOPSIS vector normalization is used to eliminate the units of criterion functions. The VIKOR method of compromise ranking determines a compromise solution, providing a maximum ‘‘group utility’’ for the ‘‘majority’’ and a minimum of an individual regret for the ‘‘opponent’’. The TOPSIS method determines a solution with the shortest distance to the ideal solution and the greatest distance from the negative-ideal solution, but it does not consider the relative importance of these distances. A comparative analysis of these two methods is illustrated with a numerical example, showing their similarity and some differences.



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Keywords

Multiple criteria analysis; Compromise; VIKOR; TOPSIS; Comparison

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Press, leadership, of course, causes a rotational law.

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