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论文

一种基于属性二元关系的大群体决策方法及应用

徐选华, 张丽媛, 陈晓红, 周艳菊

中南大学商学院,湖南 长沙 410083

A Large Group Decision Method and its Application Based on Binary-Relation of Attributes

XU Xuan-hua, ZHANG Li-yuan, CHEN Xiao-hong, ZHOU Yan-ju

School of Business, Central South University, Changsha 410083,China

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摘要 针对现有的大群体决策方法只考虑决策属性相互独立的不足,提出了一种基于决策属性之间二元关系的大群体决策方法,该方法基于二元关系形成群体成员偏好矢量属性关系矩阵,借助该关系矩阵是0-1矩阵及其范数性质,构建了两个决策成员偏好矢量相聚性度量模型,基于该模型提出了一种大群体决策偏好集结和决策方案排序方法。最后以湖南省重大冰雪灾害应急管理能力评价为案例,对方法进行了应用。

关键词： 大群体决策 二元关系 关系矩阵 偏好相聚模型

Abstract： Aimed at the disadvantage for existing large group decision methods only considering the independent decision-attributes, a new large-group decision method based on binary-relation among decision attributes is proposed. The binary relation is used to form the attribute relationship matrix of preference vector of group members. With the relationship matrix which is 0-1 matrix and its property of norm, the clustered measurement model between preference vectors of two decision members is constructed. Based on the model, a preference aggregation method for large group decision making and decision alternative ranking is proposed. Finally, the method is applied in the case of emergency management ability evaluation of major snow disaster in Hunan province of China.

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