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具有共同效应的多维信度模型

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Multidimensional credibility models with random common effects

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摘要 建立了具有随机共同效应的多维信度模型，得到了该模型中的非齐次与齐次信度估计，并讨论了这些估计的性质. 类似于经典的信度理论，具有共同效应的多维信度仍然可以表示为个体数据、聚合数据与聚合保费的加权和，其权重被称为信度因子矩阵. 最后，给出一个数值例子说明了多维信度估计的计算方法.

关键词: 信度保费 共同效应 多维信度 正交投影 信度保费 共同效应 多维信度 正交投影

Abstract: Multidimensional credibility models with a random common effect were built, and the inhomogeneous and homogeneous credibility estimators were derived. Further, some properties of these estimators were presented. Analogy to the classical credibility theory, the multidimensional credibility estimators with the common effect can also be expressed as the weighted sum of individual mean, collective mean and collective premium, where these weights are so-called credibility factor matrices. Finally, a numerical example was given to show the calculations of multidimensional credibility estimators.

Key words: random common effect multidimensional credibility orthogonal projection. credibility premium random common effect multidimensional credibility orthogonal projection.

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