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Separation of symmetry for square tables with ordinal categorical data. (English)

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Summary: The present paper considers a model that indicates the structure of asymmetry for cell probabilities for square contingency tables with ordered categories. The model is the closest to the symmetry model in terms of the f-divergence under certain conditions and incorporates existing asymmetry models in special cases. A theorem that the symmetry model can be separated into two models which have weaker restrictions than the symmetry model is given. Also, a property between test statistics for goodness of fit is discussed.

MSC:

62H17 Contingency tables

Keywords:

f-divergence; marginal homogeneity; moment equality; quasi-symmetry

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