

The log-ratio approach to handle relative information

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For many data sets the interest for the analysis is not in the measured or observed values directly, but rather in the relative information. This can be investigated by considering the log-ratios between all pairs of variables, and – to avoid over-parametrization – by constructing an orthonormal basis describing this information. Since (log-)ratios are taken, one could multiply the values of one observation by a positive constant without changing this relative information. This implies that the analysis is invariant with respect to the data scale. The log-ratio methodology is popular in the context of compositional data analysis.

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