Package ‘ahptopsis2n’

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Type Package

Title Hybrid Method for Multiple Criteria Decision-Making (MCDM)

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Description Implementation of a hybrid MCDM method build from the AHP (Analytic Hierarchy Process) and TOPSIS-2N (Technique for Order of Preference by Similarity to Ideal Solution - with two normalizations). This method is described in Souza et al. (2018) <doi:10.1142/S0219622018500207>.

License GPL-3

Encoding UTF-8

LazyData true

Suggests knitr, rmarkdown

VignetteBuilder knitr

NeedsCompilation no

Repository CRAN

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**AHP-TOPSIS-2N method**

**Description**
AHP-TOPSIS-2N is a hybrid multi-criteria decision-making method build from the AHP (Analytic Hierarchy Process) and TOPSIS-2N (Technique for Order of Preference by Similarity to Ideal Solution - with two normalizations).

**Usage**

```
ahptopsis2n(decision, criteria, minmax)
```

**Arguments**

- **decision**: a matrix where rows correspond to the alternatives and columns correspond to criteria.
- **criteria**: a matrix with pairwise comparison of criteria as in Analytic Hierarchy Process method.
- **minmax**: a vector with objectives, minimize or maximize, to each criteria.

**Details**

criteria must be in the same order on the arguments.

**Value**

dataframe with consistency ratio and two dataframes with priority sorting of the alternatives.

**Author(s)**

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**References**


**Examples**

```
decision<-matrix(c(64, 48, 1400, 
                   128, 64, 1900, 
                   64, 32, 1100), ncol=3, byrow=TRUE)

rownames(decision)<- c("A1", "A2", "A3")
```
criteria <- matrix(c(1, 3, 1/3, 
1/3, 1, 1/5, 
3, 5, 1), ncol=3, byrow=TRUE)

minmax <- c("max", "max", "min")

ahptopsis2n(decision=decision, criteria=criteria, minmax=minmax)
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