Package: ahptopsis2n (via r-universe)

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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

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Repository https://raqueldourado.r-universe.dev

RemoteUrl https://github.com/cran/ahptopsis2n

RemoteRef HEAD

RemoteSha 3ffe04df143241ae57b5cd44eb623634cf80a5e2

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ahptopsis2n   *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

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

Author(s)

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References

Souza, L. P. de, Gomes, C. F. S. and De Barros, A. P. (2018). Implementation of New Hybrid AHP–TOPSIS-2N Method in Sorting and Prioritizing of an it CAPEX Project Portfolio. International Journal of Information Technology & Decision Making. DOI: 10.1142/S0219622018500207.

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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