Package 'RMCDA'

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Title Multi-Criteria Decision Analysis in R

Version 0.0.0.9000

Description This package provides different methods of multi-criteria decision analysis.

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R topics documented:

`apply.AHP` *Apply AHP on the matrices*

Description

Apply AHP on the matrices

Usage

```
apply.AHP(A, comparing.competitors)
```

Arguments

`A`	the matrix containing information related to pairwise comparisons of criteria
`comparing.competitors`	the list of matrices related to pairwise comparisons of competitors for each criteria

Value

a list containing I. The weight of each criteria II. The criteria alternative unweighted matrix III. The weighted scores matrix IV. Competitor final scores

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`apply.ANP` *Apply Analytical Network Process (ANP) on data*

Description

Apply Analytical Network Process (ANP) on data

Usage

```
apply.ANP(A, comparing.competitors, power)
```

Arguments

`A`	the matrix containing information related to pairwise comparisons of criteria
`comparing.competitors`	the list of matrices related to pairwise comparisons of competitors for each criteria
`power`	the power value of the supermatrix

Value

the limiting super matrix

`apply.CRITIC` *Apply CRITIC on comparison matrix*

Description

Apply CRITIC on comparison matrix

Usage

```
apply.CRITIC(A)
```

Arguments

`A`	the matrix A with row names corresponding to alternatives and column names corresponding to criteria

Value

the weight percentages related to matrix A obtained through the CRITIC method

apply.FAHP *Apply fuzzy AHP on criteria comparison matrix*

Description

Apply fuzzy AHP on criteria comparison matrix

Usage

```
apply.FAHP(A)
```

Arguments

A	the comparison matrix

Value

the fuzzy weights for each criteria

apply.TOPSIS *Apply TOPSIS on matrix A with weight of criteria stored in vector w*

Description

Apply TOPSIS on matrix A with weight of criteria stored in vector w

Usage

```
apply.TOPSIS(A, w)
```

Arguments

A	the matrix A with row names corresponding to alternatives and column names corresponding to criteria
w	the weight matrix corresponding to the weight of each criteria

Value

performance scores obtained through TOPSIS

`find.entropy` *Find entropy of each criteria*

Description

Find entropy of each criteria

Usage

```
find.entropy(A)
```

Arguments

`A`	the matrix A with row names corresponding to alternatives and column names corresponding to criteria

Value

the entropy value corresponding to each criteria

`find.weight` *Finding the weights for each criteria given a pairwise comparison matrix A in the AHP method*

Description

Finding the weights for each criteria given a pairwise comparison matrix A in the AHP method

Usage

```
find.weight(A)
```

Arguments

`A`	the matrix containing information related to pairwise comparisons of criteria

Value

a list containing the value of CI/RI and a vector containing the weights of each criteria

`read.matrices` *Read csv file containing pairwise comparison matrices*

Description

Read csv file containing pairwise comparison matrices

Usage

```
read.matrices(data)
```

Arguments

`data`	the matrix containing information related to pairwise comparisons of criteria

Value

a list containing a matrix A related to pariwise comparison of criteria and a list containing multiple matrices related to pairwise comparisons of different competitor products

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