Package 'PWIR'

October 20, 2023

Title Provides a Function to Calculate Prize Winner Indices Based on Bibliometric Data

Version 0.0.3

Description A function 'PWI()' that calculates prize winner indices based on bibliometric data is provided. The default is the 'Derek de Solla Price Memorial Medal'. Users can provide recipients of other prizes.

Imports bibliometrix, igraph, progressr

License EUPL

Encoding UTF-8

LazyData true

RoxygenNote 7.1.2

NeedsCompilation no

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Repository CRAN

Date/Publication 2023-10-20 09:50:02 UTC

R topics documented:

countries *Index of Countries.*

Description

Data frame containing a normalized index of countries.
Data are used by biblioAnalysis function to extract Country Field of Cited References and Authors.

Usage

```
countries
```

Format

A data frame with 198 rows and 1 variable:

countries country names

PWI *Function to calculate prize winner indices based on bibliometric data*

Description

This function calculates prize winner indices based on bibliometric data. The default prize winners are the recipients of the Derek de Solla Price Memorial Medal. Users can provide recipients of other prizes.

Usage

```
PWI(
  files,
  pw_pattern = "(BOYACK K)|(KLAVANS R)|(BORNMANN L)|(...",
  method = 1,
  verbosity = 1,
  data_source = "wos",
  data_format = "plaintext"
)
```

Arguments

files	character variable or list of character variables that contain(s) file name(s) of bibliographic data file(s) that are supported by the package bibliometrix
pw_pattern	character variable (optional parameter) that is passed as search pattern to the grep function to identify the prize winners in the data set

method	integer variable (optional parameter) that determines if only the authors in the dataset with number of papers and co-authors is returned or if the prize winner index is calculated 0: return only a list with authors, number of papers, and number of co-authorships 1: calculate the prize winner index and return it alongside with number of papers and number of co-authorships
verbosity	level of verbosity (0=quiet and 1=informative)
data_source	specifies the data source; this parameter is forwarded to the function convert2df from the R package bibliometrix. The default value is "wos"; other possible values are: "isi", "scopus", "dimensions", or "pubmed"
data_format	specifies the data format; this parameter is forwarded to the function convert2df from the R package bibliometrix. The default value is "plaintext"; other possible values are: "api", "bibtex", "endnote", "csv", or "excel"

Details

PWI(files=bibliographic_files, pw_pattern = '(BOYACK K)|(KLAVANS R)|(BORNMANN L)|(BARILAN J)|(BARILAN J)| (WALTMAN L)|(THELWALL M)|(CRONIN B)|(PERSSON O)|(VINKLER P)|(MCCAIN K)|(INGWERSEN P)| (LEYDESDORFF L)|(ROUSSEAU R)|(EGGHE L)|(GLANZEL W)|(GLAENZEL W)|(MOED H)|(IRVINE J)| (MARTIN B)|(GRIFFITH B)|(VAN RAAN A)|(VANRAAN A)|(MERTON R)|(SCHUBERT A)|(BROOKES B)| (NARIN F)|(NALIMOV V)|(BRAUN T)|(MORAVCSIK M)|(GARFIELD E)', method=1, verbosity=1, data_source='wos', data_format='plaintext') Only the argument files is necessary. All other arguments are optional.

Literature:

- Bornmann, L. & Haunschild, R. (in preparation). "Prize Winner Index".

Value

data frame of researcher names, PWI value, number of papers, and number of co-authors

Examples

```
JoI <- PWI('http://andreas-thor.github.io/cre/data/savedrecs_JOI2.txt')
head(JoI)
```

PWI2 *Function to calculate prize winner indices based on bibliometric data*

Description

This function calculates prize winner indices based on bibliometric data. The default prize winners are the recipients of the Derek de Solla Price Memorial Medal. Users can provide recipients of other prizes.

Usage

```
PWI2(
  bib_df,
  pw_pattern = "(BOYACK K)|(KLAVANS R)|(BORNMANN L)|(...",
  method = 1,
  verbosity = 1
)
```

Arguments

bib_df	bibliographic dataframe variable from convert2df
pw_pattern	character variable (optional parameter) that is passed as search pattern to the grep function to identify the prize winners in the data set
method	integer variable (optional parameter) that determines if only the authors in the dataset with number of papers and co-authors is returned or if the prize winner index is calculated 0: return only a list with authors, number of papers, and number of co-authorships 1: calculate the prize winner index and return it alongside with number of papers and number of co-authorships
verbosity	level of verbosity (0=quiet and 1=informative)

Details

PWI2(bib_df=bibliographic_dataframe, pw_pattern = '(BOYACK K)|(KLAVANS R)|(BORNMANN L)|(BAR-ILAN J)|(BARILAN J)| (WALTMAN L)|(THELWALL M)|(CRONIN B)|(PERSSON O)|(VINKLER P)|(MCCAIN K)|(INGWERSEN P)| (LEYDESDORFF L)|(ROUSSEAU R)|(EGGHE L)|(GLANZEL W)|(GLAENZEL W)|(MOED H)|(IRVINE J)| (MARTIN B)|(GRIFFITH B)|(VAN RAAN A)|(VANRAAN A)|(MERTON R)|(SCHUBERT A)|(BROOKES B)| (NARIN F)|(NALIMOV V)|(BRAUN T)|(MORAVCSIK M)|(GARFIELD E)', method=1, verbosity=1) Only the argument bib_df is necessary. All other arguments are optional.

Literature:

- Bornmann, L. & Haunschild, R. (in preparation). "Prize Winner Index".

Value

data frame of researcher names, PWI value, number of papers, and number of co-authors

Examples

```
bib_df <- bibliometrix::convert2df('http://andreas-thor.github.io/cre/data/savedrecs_JOI2.txt')
JoI <- PWI2(bib_df)
head(JoI)
```

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