Package 'esaps'

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Type Package

Title Indicators of Electoral Systems and Party Systems

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Description It allows to construct two types of indicators used in the study of Electoral Systems and Party Systems starting from electoral results data. The Effective Number of Parties (Laakso and Taagepera (1979) <doi:10.1177/001041407901200101>) and Electoral Volatility in its three versions (Pedersen (1979) <doi:10.1111/j.1475-6765.1979.tb01267.x>, Powell and Tucker (2014) <doi:10.1017/S0007123412000531> and Torcal and Lago (2015, ISBN:9788415260356)).

License GPL-2

URL https://github.com/Nicolas-Schmidt/esaps

Encoding UTF-8

LazyData true

Imports plyr (>= 1.8.4), readODS (>= 1.6.4), readxl (>= 1.0.0)

RoxygenNote 6.0.1

NeedsCompilation no

Repository CRAN

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enp *Effective Number of Parties*

Description

The Effective Number of Parties (ENP) is an index developed by Laakso and Taagepera (1979) that allows to count the relevant parties in a party system. The formula consists on dividing one over the sum of the squares of the proportions (votes or seats) that the parties obtain in an electoral instance.

Usage

```
enp(esapsObject, summary = FALSE)
```

Arguments

esapsObject	An esaps class object. Function: esaps_object.
summary	Summary of the data by country, by default it is FALSE.

Examples

```
votes <- list(data.frame(country = rep("ARG", 3),
                         year = c(1995, 2000, 2005),
                         party_A = c(40,10,20),
                         party_B = c(35,20,40),
                         party_C = c(25,70,40)),
              data.frame(country = rep("URY", 4),
                         year = c(1995, 2000, 2005, 2010),
                         party_A = c(30,30,20,20),
                         party_B = c(30,50,40, 30),
                         party_C = c(30,10,30, 25),
                         party_D = c(10,10,10,25)),
              data.frame(country = rep("BRA", 2),
                         year = c(1993, 1998),
                         party_A = c(30, 55),
                         party_B = c(70, 45)))

votes <- esaps_object(dataset = votes, name.country = "country", name.year = "year")
en_party <- enp(votes, summary = TRUE)
```

esaps_object *Create an object of class esaps*

Description

Create an object of esaps class to calculate party system indicators.

Usage

```
esaps_object(path = NULL, dataset = NULL, name.file = NULL,
  extention = NULL, nCountry = NULL, name.year, name.country,
  name.M = NULL)
```

Arguments

path	Character vector containing one or more path names.
dataset	Electoral results by party. It can be a matrix, a data.frame or a list.
name.file	Name of the database file.
extention	Extension of the database format.
nCountry	Number of countries (number of sheets).
name.year	Name of the variable that contains years.
name.country	Name of the variable that contains the country.
name.M	Name of the variable that contains the district magnitude (M+1). It is for the calculation of endogenous and exogenous electoral volatility (Torcal and Lago, 2015).

Examples

```
votes <- list(data.frame(country = rep("ARG", 3),
                         year = c(1995, 2000, 2005),
                         party_A = c(40,10,20),
                         party_B = c(35,20,40),
                         party_C = c(25,70,40)),
              data.frame(country = rep("URY", 4),
                         year = c(1995, 2000, 2005, 2010),
                         party_A = c(30,30,20,20),
                         party_B = c(30,50,40, 30),
                         party_C = c(30,10,30, 25),
                         party_D = c(10,10,10,25)),
              data.frame(country = rep("BRA", 2),
                         year = c(1993, 1998),
                         party_A = c(30, 55),
                         party_B = c(70, 45)))

votes <- esaps_object(dataset=votes, name.country="country", name.year="year")
is(votes, "esaps")    ## TRUE
```

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evolat *Electoral volatility calculation*

Description

Electoral volatility calculation: Pedersen (1979), Powell and Tucker (2014) and Torcal and Lago (2015).

Usage

```
evolat(esapsObject, method, threshold = 2, summary = FALSE, digits = 2)
```

Arguments

esapsObject	An esaps class object. Function: esaps_object.
method	Method to calculate electoral volatility: "Pedersen", "Powell and Tucker" or "Torcal and Lago".
threshold	Minimum threshold for 'Type A' electoral volatility calculation (Powell and Tucker, 2014). By default is 2%.
summary	Summary of data by country, by default it is FALSE.
digits	integer indicating the number of decimal places to be used.

Examples

```
votes <- list(data.frame(country = rep("ARG", 3),
                         year = c(1995, 2000, 2005),
                         party_A = c(40,10,20),
                         party_B = c(35,20,40),
                         party_C = c(25,70,40)),
              data.frame(country = rep("URY", 4),
                         year = c(1995, 2000, 2005, 2010),
                         party_A = c(30,30,20,20),
                         party_B = c(30,50,40, 30),
                         party_C = c(30,10,30, 25),
                         party_D = c(10,10,10,25)),
              data.frame(country = rep("BRA", 2),
                         year = c(1993, 1998),
                         party_A = c(30, 55),
                         party_B = c(70, 45)))

votes <- esaps_object(dataset = votes, name.country = "country", name.year = "year")
volatility <- evolat(esapsObject = votes, method = "Pedersen", summary = TRUE)
```

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