Package 'partynat'

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Type Package

Title A package for party nationalization indices

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Description `partynat' is an R package for indices of party nationalization and related quantities.

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`partynat-package` *partynat, a package for party nationalization indices*

Description

partynat is a package for indices of party nationalization and related quantities.

Details

Package:	partynat
Type:	Package
Version:	0.2
Date:	2022-05-17
License:	GPL >= 2

Author(s)

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References

Medzihorsky, Juraj. 2022. Unifying the measurement of variation in electoral support.

`partynat` *Function to obtain selected party nationalization indices or related quantities.*

Description

This function inputs data in the form of territory-by-choice matrix and outputs the value of the selected index for the whole system, and if available, also for each choice. The index can be either selected from those implemented in the package or a user-supplied function. To obtain interval estimates, the user can select from jackknife, nonparametric bootstrap, and subsampling.

Usage

```
partynat(mat, statistic = "PNS", weight_choice = TRUE, weight_territory = TRUE, boot = FALSE, jack = FAL
```

Arguments

`mat`	A territory-by-choice matrix.
`statistic`	Either a character vector indicating the index to use, or a user supplied function. See Details
`weight_choice`	Logical, weight choice?
`weight_territory`	Logical, weight territory?
`boot`	Logical, perform non-parametric bootstrap?
`jack`	Logical, perform jackknife?
`subsample`	Logical, perform subsampling?
`n_rep`	Numeric, the number of replicates for bootstrap and subsampling.
`bias`	Logical, perform bias correction if a resampling procedure is used.
`size`	Numeric, subsample size for resampling.
`confidence_level`	Numeric, confidence level for interval estimates if a resampling procedure is used.

Details

- "IPA2" Index of Party Aggregation (Allik 2006)
- "PNSW" Weighted Party (System) Nationalization Score (Bochsler 2010)
- "PNS10" Standardized Party (System) Nationalization Score (Bochsler 2010)
- "TCI" Territorial Coverage Index (Caramani 2004)
- "IPR2" Index adjusted for Party size and number of Regions (Caramani 2004)
- "IPA1" Indicator of Party Aggregation (Chhibber and Kollman 1998)
- "IS" Inflation Score (Cox 1999)
- "VC" Variability Coefficient (Ersson, Janda, and Lane 1985)
- "SWVC" Standardized and Weighted Variability Coefficient (Ersson, Janda, and Lane 1985)
- "CPR" Coefficient of Party Regionalization (Golosov 2016)
- "IPN" Index of Party (System) Nationalization (Golosov 2016)
- "NPNS" Normalized Party (System) Nationalization Score (Golosov 2016)
- "NVC" Normalized Coefficient of Variation (Golosov 2016)
- "IPR1" Index of Party Regionalization (Golosov and Ponarin 1999)
- "PNS" Party Nationalization Score (Jones and Mainwaring 2003)
- "Lee" Lee index (Lee 1988)
- "II" Inflation Index (Moenius and Kasuya 2004)
- "MAD" Index of variation/Mean Absolute Deviation (Rose and Urwin 1975)
- "CRI" Cumulative Regional Inequality (Rose and Urwin 1975)
- "MSD" Mean Standard Deviation of row shares
- "Var" Variance of row shares
- "MI" Mutual Information (Frankel and Volij 2011)
- "Delta" Dissimilarity index for choice-group independence (Medzihorsky 2022)

Value

An object of S3 class `'partynat'`, a list composed of

`call`	The matched call.
`stat`	The statistics argument
`name`	The name of the index
`total`	Value of the index for the whole table. If resampling is applied, includes standard errors and confidence intervals.
`choices`	Values of the index for each choice. NA if not defined under the selected index. If resampling is applied, includes standard errors and confidence intervals.
`confidence_level`	The requested confidence level in case bootstrap, jackknife, or subsampling were performed.

Author(s)

Juraj Medzihorsky

See Also

plot.partynat summary.partynat

Examples

```
set.seed(1234)
tab_1 <- matrix(round(rpois(40, 100)*rbeta(40, 1, 1)),
                nrow=10, ncol=4)
rownames(tab_1) <- paste0(1:nrow(tab_1))
colnames(tab_1) <- LETTERS[1:4]
head(tab)
d_1 <- partynat(tab_1, boot=TRUE, n_rep=1e2)
summary(d_1)
```

---

plot.partynat *function for plotting objects of class* 'partynat'

Description

The function produces a dot-plot of idnex values for objects of class 'partynat'.

Usage

```
plot.partynat(x, ...)
```

Arguments

x	An object of S3 class 'partynat'.
...	Further arguments to be passed to plot().

Value

A plot.

Author(s)

Juraj Medzihorsky

See Also

partynat

summary.partynat *function for summaries of* 'partynat' *objects*

Description

The function inputs an object of S3 class 'partynat' and returns its summary.

Usage

```
summary.partynat(x, d = 2, ...)
```

Arguments

x	An object of S3 class 'partynat'.
d	Numeric, number of digits to print.
...	Further arguments to be passed. Currently unused.

Value

The summary is only printed on the console, i.e., no object is saved.

Author(s)

Juraj Medzihorsky

See Also

partynat

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