Package 'Inflation'

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Type Package

Title Core Inflation

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Description Provides access to core inflation functions. Four different core inflation functions are provided. The well known trimmed means, exclusion and double weighing methods, alongside the new Triple Filter method introduced in Ferreira et al. (2016) <https://goo.gl/UYLhcj>.

Depends R (>= 3.3.1)

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Encoding UTF-8

LazyData true

RoxygenNote 6.0.1

Imports seasonal

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NeedsCompilation no

BugReports https://github.com/fernote7/Inflation/issues

URL https://github.com/fernote7/Inflation

Suggests covr

Repository CRAN

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Contents

`INFL.core_dw` *Computes the double weighted core inflation*

Description

Computes the double weighted core inflation

Usage

```
INFL.core_dw(infl.var, subits.var, weights, wind = 12)
```

Arguments

`infl.var`	A `ts` object. The inflation index variation.
`subits.var`	A `ts`. Subitems' variation.
`weights`	A `ts`. Weights corresponding to each subitem.
`wind`	An `integer`. The volatility's window size.

Value

A `ts` object.

Examples

```
ipca <- Inflation::ipca_item
nuc <- Inflation::INFL.core_dw(ipca$ipca_index, ipca$ipca_ts, ipca$weights_ts, wind = 12)
```

INFL.core_ex *Computes the core inflation using the subitem exclusion method*

Description

Computes the core inflation using the subitem exclusion method

Usage

```
INFL.core_ex(subits.var, weights, info, n.blocks = 4, alpha = 2)
```

Arguments

subits.var	A ts. Inflation subitems' variation.
weights	A ts. Each subitem corresponding weights. If missing, all items get the same weight.
info	A data.frame. Subitem metadata table containing their codes and descriptions.
n.blocks	An integer. Partitions' number inside the temporal window.
alpha	An integer. Significance level in percentage.

Examples

```
ipca <- Inflation::ipca_sub
ipc.ex1 <- Inflation::INFL.core_ex(subits.var = ipca$ipca_ts,
                                   weights = ipca$weights_ts,
                                   info = ipca$cod,
                                   n.blocks = 4,
                                   alpha = 2)
```

INFL.core_tf *Computes the triple filter core inflation*

Description

Computes the triple filter core inflation

Usage

```
INFL.core_tf(subits.var, weights, smoo, inf = 20, sup = 20, wind = 12,
  x11 = NULL, ...)
```

Arguments

subits.var	A ts. Subitems' variation.
weights	A ts. Each subitem corresponding weights. If missing, all items get the same weight.
smoo	A vector. List of codes to be smoothed. If missing, no item will be smoothed.
inf	An integer. Percentage lower tail cut. Predefined as 20.
sup	An integer. Percentage upper tail cut. Predefined as 20.
wind	An integer. The volatility's window size to be computed.
x11	A string. If an empty string is passed as argument, the seasonal adjustment uses x11 methodology.
...	arguments passed on to seas to compute the seasonal adjustment.

Value

A ts object.

Examples

```
ipca <- ipca_sub
INFL.core_tf(subits.var=ipca$ipca_ts, weights = ipca$weights_ts)
```

INFL.core_tm *Computes the trimmed means core inflation*

Description

Computes the trimmed means core inflation

Usage

```
INFL.core_tm(subits.var, weights, smoo, inf = 20, sup = 20, wind = 12)
```

Arguments

subits.var	A ts. Subitems' variation.
weights	A ts. Each subitem corresponding weights. If missing, all items get the same weight.
smoo	A vector. List of codes to be smoothed. If missing, no item will be smoothed.
inf	An integer. Percentage lower tail cut. Predefined as 20.
sup	An integer. Percentage upper tail cut. Predefined as 20.
wind	An integer. The volatility's window size.

Value

A `list` object. The list contains two time-series (`ts` objects). The computed core and the variables that were used to calculate the means.

Examples

```
ipca_sub <- Inflation::ipca_sub
nuc <- Inflation::INFL.core_tm(subits.var = ipca_sub$ipca_ts, weights = ipca_sub$weights_ts)
```

Inflation *An R package providing tools for those who want to figure out the core inflation of their series.*

Description

The Inflation package provides tools that allow its user to better understand core inflation.

The package provides a set of functions that compute the core inflation based on items that are part of an inflation index. Currently, the package allows for four different core inflation computations methods: trimmed means, exclusion, double weighting and triple filter. The first three are well known by the public. The latter is a method we developed that we believe is a better measure.

Note

The authors would like to thank the support by the Getulio Vargas Foundation (FGV) and make it clear that all data in the package is in public domain. We reaffirm that Inflation is mainly intended for academic usage.

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ipca_item *IPCA items and its weights*

Description

A dataset containing the IPCA items, their respective weights and codes in tibble format. Items and codes are also provided in ts data structure.

Usage

```
ipca_item
```

Format

A list with five attributes:

ipca dataframe with ipca items

weights dataframe with weights items

ipca_ts ts with ipca items

weights_ts ts with weights items

cod Items' codes

Source

https://sidra.ibge.gov.br

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ipca_sub *IPCA subitems and its weights*

Description

A dataset containing the IPCA items, their respective weights and codes in tibble format. Subitems and codes are also provided in ts data structure.

Usage

```
ipca_sub
```

Format

A list with six attributes:

ipca dataframe with ipca subitems

weights dataframe with weights subitems

ipca_ts ts with ipca subitems

weights_ts ts with weights subitems

cod Subitems' codes

ipca_index The full index

Source

https://sidra.ibge.gov.br

`vol.mat` *Computes the volatility matrix*

Description

!! DESCREVER O QUE É A MATRIZ

Usage

```
vol.mat(x, info, n.blocks, alpha)
```

Arguments

`x`	Subitems' variation.
`info`	Subitems' metadata.
`n.blocks`	Number of cuts to be made.
`alpha`	Significance level.

Index