Package 'disagg2'

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Type Package

Title Support Functions for Time Series Analysis Book

Version 0.1.0

Description Contains the support functions for the Time Series Analysis book. We present a function to calculate MSE and MAE for inputs of actual and forecast values. We also have the code for disaggregation as found in Wei and Stram (1990, <doi:10.1111/j.2517-6161.1990.tb01799.x>), and Hodgess and Wei (1996, ``Temporal Disaggregation of Time Series").

Depends R (>= 4.4.0), PolynomF

License GPL-2 | GPL-3

Encoding UTF-8

RoxygenNote 7.3.1

NeedsCompilation no

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Repository CRAN

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Contents

`disag1` *Create a disaggregated time series*

Description

Input an annual, quarterly series. Create a quarterly or monthly series via ARIMA

Usage

```
disag1(x, m)
```

Arguments

`x`	Input ts, must have frequency of 1 or 4
`m`	Order of disaggregation, must be 12, 4, or 3

Details

Uses ARIMA model on the aggregate series to create a disaggregate series

Value

`y_s`	Disag. series to be summed
`y_m`	Disag. series mean
`disphi`	Disagg phi value
`distheta`	Disagg theta value
`dissig2`	Disagg sigma2

References

William W.S. Wei and Daniel Stram, 1990, Disaggregation of Time Series Models, Journal of the Royal Statistics Society, B, Vol 52, Number 3, pp. 453-467. Erin M. Hodgess and William W.S. Wei, 1996, Temporal Disaggregation of Time Series, Applied Statistical Science I, pp. 33-43, Nova Science Publishers, Commack, NY

`foremeas1` *Calculate MSE and MAE for actual and forecast values*

Description

The inputs are the actual and the forecast values. We calculate the Mean Square Error (MSE) and Mean Absolute Error (MAE)

Usage

```
foremeas1(actx, forex)
```

Arguments

`actx`	actual values
`forex`	forecast values

Details

MSE = mean((act-fore)^2), MAE = mean(abs(act-fore))

Value

`MSE`	Mean square error
`MAE`	Mean absolute error

Author(s)

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`mySym` *Create an nxn symmetric matrix from an n length vector*

Description

Create an nxn symmetric matrix from an n length vector

Usage

```
mySym(x)
```

Arguments

`x`	input length n vector

Details

create an nxn symmetric matrix

Value

y	symmetric matrix

Author(s)

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Examples

```
##---- Should be DIRECTLY executable !! ----
##-- ==>  Define data, use random,
##--or standard data sets, see data().
mySym(1:6)
```

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