Package 'manMetaVAR'

August 2, 2024

Title Multivariate Meta-Analysis of Vector Autoregressive Model
Coefficients

Version 0.9.1

Description Research compendium for the manuscript
Pesigan, I. J. A., et al. (2024).
Multivariate Meta-Analysis of Vector Autoregressive Model Coefficients.
<doi:10.0000/0000000000>.

URL <https://github.com/jeksterslab/manMetaVAR>,

<https://jeksterslab.github.io/manMetaVAR/>,

<https://osf.io/qwnmf/?view_only=855be2012b554f05bbc679946845bab8>,

<https://doi.org/10.0000/0000000000>

BugReports <https://github.com/jeksterslab/manMetaVAR/issues>

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Encoding UTF-8

LazyData true

Roxygen list(markdown = TRUE)

Depends R (>= 3.5.0), OpenMx, fitDTVARMx, metaVAR

Imports simStateSpace, mlVAR

Remotes jeksterslab/fitDTVARMx, jeksterslab/metaVAR

Suggests knitr, rmarkdown, testthat

RoxygenNote 7.3.2

NeedsCompilation no

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Contents

Compress	*Compress Replication*

Description

Compress Replication

Usage

```
Compress(taskid, repid, output_folder)
```

Arguments

taskid	Positive integer. Task ID.
repid	Positive integer. Replication ID.
output_folder	Character string. Output folder.

Value

The output is saved as an external file in `output_folder`.

Author(s)

Ivan Jacob Agaloos Pesigan

FitDTVARMx *Fit the Model using the fitDTVARMx Package*

Description

The function fits the model using the fitDTVARMx package.

Usage

```
FitDTVARMx(data)
```

Arguments

data   R object. Output of the `GenData()` function.

See Also

Other Model Fitting Functions: `FitMLVAR()`

Examples

```
## Not run:
set.seed(42)
data <- GenData(n = 50, time = 100, theta = 0.2)
FitDTVARMx(data)

## End(Not run)
```

FitMetaVARMx *Multivariate Meta-Analysis using the metaVAR Package*

Description

The function performs multivariate meta-snalysis using the metaVAR package.

Usage

```
FitMetaVARMx(fit)
```

Arguments

fit   R object. Output of the `FitDTVARMx()` function.

Examples

```
## Not run:
set.seed(42)
data <- GenData(n = 50, time = 100, theta = 0.2)
fit <- FitDTVARMx(data)
FitMetaVARMx(fit)

## End(Not run)
```

FitMLVAR   *Fit the Model using the mlVAR Package*

Description

The function fits the model using the [mlVAR](#) package.

Usage

```
FitMLVAR(data)
```

Arguments

data   R object. Output of the [GenData()](#) function.

See Also

Other Model Fitting Functions: [FitDTVARMx()](#)

Examples

```
## Not run:
set.seed(42)
data <- GenData(n = 50, time = 100, theta = 0.2)
FitMLVAR(data)

## End(Not run)
```

GenData *Simulate Data*

Description

The function simulates data using the [simStateSpace::SimSSMIVary()](#) function.

Usage

```
GenData(n, time, theta)
```

Arguments

n	Positive integer. Sample size.
time	Positive integer. Number of time points.
theta	Numeric. Measurement error variance.

Examples

```
## Not run:
set.seed(42)
data <- GenData(n = 50, time = 100, theta = 0.2)
plot(data)

## End(Not run)
```

---

params *Simulation Parameters*

Description

Simulation Parameters

Usage

```
params
```

Format

A dataframe with 25 rows and 3 columns:

taskid Simulation Task ID.

n Sample size.

time Number of measurement occassions.

Author(s)

Ivan Jacob Agaloos Pesigan

Sim   *Simulation Replication*

Description

Simulation Replication

Usage

```
Sim(taskid, repid, output_folder, overwrite, integrity, params_taskid)
```

Arguments

taskid	Positive integer. Task ID.
repid	Positive integer. Replication ID.
output_folder	Character string. Output folder.
overwrite	Logical. Overwrite existing output in output_folder.
integrity	Logical. If integrity = TRUE, check for the output file integrity when overwrite = FALSE.
params_taskid	Data frame with a single row. Simulation parameters for a specific taskid.

Value

The output is saved as an external file in output_folder.

Author(s)

Ivan Jacob Agaloos Pesigan

SimFitDTVARMx   *Simulation Replication - FitDTVARMx*

Description

Simulation Replication - FitDTVARMx

Usage

```
SimFitDTVARMx(taskid, repid, output_folder, seed, suffix, overwrite, integrity)
```

Arguments

`taskid`	Positive integer. Task ID.
`repid`	Positive integer. Replication ID.
`output_folder`	Character string. Output folder.
`seed`	Integer. Random seed.
`suffix`	Character string. Output of `manCTMed:::.SimSuffix()`.
`overwrite`	Logical. Overwrite existing output in `output_folder`.
`integrity`	Logical. If `integrity = TRUE`, check for the output file integrity when `overwrite = FALSE`.

Details

This function is executed via the `Sim` function.

Value

The output is saved as an external file in `output_folder`.

Author(s)

Ivan Jacob Agaloos Pesigan

SimFitMetaVARMx *Simulation Replication - FitMetaVARMx*

Description

Simulation Replication - FitMetaVARMx

Usage

```
SimFitMetaVARMx(
  taskid,
  repid,
  output_folder,
  seed,
  suffix,
  overwrite,
  integrity
)
```

Arguments

`taskid`	Positive integer. Task ID.
`repid`	Positive integer. Replication ID.
`output_folder`	Character string. Output folder.
`seed`	Integer. Random seed.
`suffix`	Character string. Output of `manCTMed:::.SimSuffix()`.
`overwrite`	Logical. Overwrite existing output in `output_folder`.
`integrity`	Logical. If `integrity = TRUE`, check for the output file integrity when `overwrite = FALSE`.

Details

This function is executed via the `Sim` function.

Value

The output is saved as an external file in `output_folder`.

Author(s)

Ivan Jacob Agaloos Pesigan

SimFitMLVAR   *Simulation Replication - FitMLVAR*

Description

Simulation Replication - FitMLVAR

Usage

```
SimFitMLVAR(taskid, repid, output_folder, seed, suffix, overwrite, integrity)
```

Arguments

`taskid`	Positive integer. Task ID.
`repid`	Positive integer. Replication ID.
`output_folder`	Character string. Output folder.
`seed`	Integer. Random seed.
`suffix`	Character string. Output of `manCTMed:::.SimSuffix()`.
`overwrite`	Logical. Overwrite existing output in `output_folder`.
`integrity`	Logical. If `integrity = TRUE`, check for the output file integrity when `overwrite = FALSE`.

Details

This function is executed via the Sim function.

Value

The output is saved as an external file in output_folder.

Author(s)

Ivan Jacob Agaloos Pesigan

SimFN   *Simulation File Name*

Description

Simulation File Name

Usage

```
SimFN(output_type, output_folder, suffix)
```

Arguments

output_type   Character string. Output type. Valid values include "data", "fit-dynr", "dynr-delta-xmy", "dynr-delta-ymx", "dynr-mc-xmy", and "dynr-mc-ymx"

output_folder   Character string. Output folder.

suffix   Character string. Output of manCTMed:::.SimSuffix().

Value

Returns a character string file name with the output_folder in the OS-specific format.

SimGenData   *Simulation Replication - GenData*

Description

Simulation Replication - GenData

Usage

```
SimGenData(
  taskid,
  repid,
  output_folder,
  params_taskid,
  seed,
  suffix,
  overwrite,
  integrity
)
```

Arguments

taskid	Positive integer. Task ID.
repid	Positive integer. Replication ID.
output_folder	Character string. Output folder.
params_taskid	Data frame with a single row. Simulation parameters for a specific taskid.
seed	Integer. Random seed.
suffix	Character string. Output of manCTMed:::.SimSuffix().
overwrite	Logical. Overwrite existing output in output_folder.
integrity	Logical. If integrity = TRUE, check for the output file integrity when overwrite = FALSE.

Details

This function is executed via the Sim function.

Value

The output is saved as an external file in output_folder.

Author(s)

Ivan Jacob Agaloos Pesigan

SimProj *Simulation Project Name*

Description

Simulation Project Name

Usage

```
SimProj()
```

Value

Returns the project name as a character string.

Author(s)

Ivan Jacob Agaloos Pesigan

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