

Package ‘fitDTVARMx’

July 3, 2024

Title Fit The Discrete-Time Vector Autoregressive Model

Version 0.0.0.9000

Description Fit the discrete-time vector autoregressive model using the 'OpenMx' package.

URL <https://github.com/jeksterslab/fitDTVARMx>,
<https://jeksterslab.github.io/fitDTVARMx/>

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

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Encoding UTF-8

Roxygen list(markdown = TRUE)

VignetteBuilder knitr

Depends R (>= 3.0.0), OpenMx

Imports stats

Suggests knitr, rmarkdown, testthat, simStateSpace

RoxygenNote 7.3.2

NeedsCompilation no

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coef.fitdtvaridmx	<i>Parameter Estimates</i>
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Description

Parameter Estimates

Usage

```
## S3 method for class 'fitdtvaridmx'  
coef(object, psi = TRUE, ...)
```

Arguments

- object Object of class fitdtvaridmx.
- psi Logical. If psi = TRUE, include estimates of the psi matrix. If psi = FALSE, exclude estimates of the psi matrix.
- ... additional arguments.

Value

Returns a list of vectors of parameter estimates.

Author(s)

Ivan Jacob Agaloos Pesigan

FitDTVARIDMx	<i>Fit First Order Discrete-Time Vector Autoregressive Model by ID</i>
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Description

Fit First Order Discrete-Time Vector Autoregressive Model by ID

Usage

```
FitDTVARIDMx(  
  data,  
  observed,  
  id,  
  beta_start = NULL,  
  beta_lbound = NULL,  
  beta_ubound = NULL,  
  psi_start = NULL,  
  psi_lbound = NULL,
```

```

    psi_ubound = NULL,
    psi_diag = TRUE,
    try = 1000,
    ncores = NULL
  )

```

Arguments

data	Data frame. A data frame object of data for potentially multiple subjects that contain a column of subject ID numbers (i.e., an ID variable), and at least one column of observed values.
observed	Character vector. A vector of character strings of the names of the observed variables in the data.
id	Character string. A character string of the name of the ID variable in the data.
beta_start	Optional starting values for beta.
beta_lbound	Optional lower bound for beta.
beta_ubound	Optional upper bound for beta.
psi_start	Optional starting values for psi.
psi_lbound	Optional lower bound for psi.
psi_ubound	Optional upper bound for psi.
psi_diag	Logical. If psi_diag = TRUE, psi is a diagonal matrix.
try	Positive integer. Number of extra tries for OpenMx::mxTryHard() .
ncores	Positive integer. Number of cores to use.

Author(s)

Ivan Jacob Agaloos Pesigan

print.fitdtvaridmx *Print Method for Object of Class fitdtvaridmx*

Description

Print Method for Object of Class fitdtvaridmx

Usage

```

## S3 method for class 'fitdtvaridmx'
print(x, means = TRUE, ...)

```

Arguments

x	an object of class fitdtvaridmx.
means	Logical. If means = TRUE, return means. Otherwise, the function returns raw estimates.
...	further arguments.

Author(s)

Ivan Jacob Agaloos Pesigan

summary.fitdtvaridmx *Summary Method for Object of Class fitdtvaridmx*

Description

Summary Method for Object of Class fitdtvaridmx

Usage

```
## S3 method for class 'fitdtvaridmx'
summary(object, means = TRUE, ...)
```

Arguments

object	an object of class fitdtvaridmx.
means	Logical. If means = TRUE, return means. Otherwise, the function returns raw estimates.
...	further arguments.

Author(s)

Ivan Jacob Agaloos Pesigan

vcov.fitdtvaridmx *Sampling Covariance Matrix of the Parameter Estimates*

Description

Sampling Covariance Matrix of the Parameter Estimates

Usage

```
## S3 method for class 'fitdtvaridmx'
vcov(object, psi = TRUE, ...)
```

Arguments

object	Object of class fitdtvaridmx.
psi	Logical. If psi = TRUE, include estimates of the psi matrix. If psi = FALSE, exclude estimates of the psi matrix.
...	additional arguments.

Value

Returns a list of sampling variance-covariance matrices.

Author(s)

Ivan Jacob Agaloos Pesigan

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