

Package ‘fitDTVARMx’

July 4, 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>

License MIT + file LICENSE

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

Author Ivan Jacob Agaloos Pesigan [aut, cre, cph]
(<https://orcid.org/0000-0003-4818-8420>)

Maintainer Ivan Jacob Agaloos Pesigan <r.jeksterslab@gmail.com>

Contents

coef.fittedvaridmx	2
FitDTVARIDMx	2
print.fittedvaridmx	4
summary.fittedvaridmx	4
vcov.fittedvaridmx	5

Index	6
--------------	----------

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

Description

Parameter Estimates

Usage

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

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.
theta	Logical. If theta = TRUE, include estimates of the theta matrix if available. If theta = FALSE, exclude estimates of the theta 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>
--------------	--

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,
    theta = FALSE,
    theta_start = NULL,
    theta_lbound = NULL,
    theta_ubound = NULL,
    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	Numeric matrix. Optional starting values for beta.
beta_lbound	Numeric matrix. Optional lower bound for beta.
beta_ubound	Numeric matrix. Optional upper bound for beta.
psi_start	Numeric matrix. Optional starting values for psi.
psi_lbound	Numeric matrix. Optional lower bound for psi.
psi_ubound	Optional upper bound for psi.
psi_diag	Logical. If psi_diag = TRUE, psi is a diagonal matrix.
theta	Logical. If theta = TRUE, estimate the diagonal measurement error matrix theta.
theta_start	Optional starting values for theta. Ignored if theta = FALSE.
theta_lbound	Optional lower bound for theta. Ignored if theta = FALSE.
theta_ubound	Optional upper bound for theta. Ignored if theta = FALSE.
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.fittedvaridmx	<i>Sampling Covariance Matrix of the Parameter Estimates</i>
--------------------	--

Description

Sampling Covariance Matrix of the Parameter Estimates

Usage

```
## S3 method for class 'fittedvaridmx'  
vcov(object, psi = FALSE, theta = FALSE, ...)
```

Arguments

object	Object of class fittedvaridmx.
psi	Logical. If psi = TRUE, include estimates of the psi matrix. If psi = FALSE, exclude estimates of the psi matrix.
theta	Logical. If theta = TRUE, include estimates of the theta matrix if available. If theta = FALSE, exclude estimates of the theta matrix.
...	additional arguments.

Value

Returns a list of sampling variance-covariance matrices.

Author(s)

Ivan Jacob Agaloos Pesigan

Index

- * **Meta-Analysis of VAR Functions**

- FitDTVARIDMx, [2](#)

- * **fit**

- FitDTVARIDMx, [2](#)

- * **metaVAR**

- FitDTVARIDMx, [2](#)

- * **methods**

- coef.fitdtvaridmx, [2](#)

- print.fitdtvaridmx, [4](#)

- summary.fitdtvaridmx, [4](#)

- vcov.fitdtvaridmx, [5](#)

coef.fitdtvaridmx, [2](#)

FitDTVARIDMx, [2](#)

OpenMx::mxTryHard(), [3](#)

print.fitdtvaridmx, [4](#)

summary.fitdtvaridmx, [4](#)

vcov.fitdtvaridmx, [5](#)