Package ‘mxmmod’

May 18, 2021

Type Package
Title Measurement Model of Derivatives in 'OpenMx'
Version 1.1.0
Description Provides a convenient interface in 'OpenMx' for building
Derivatives (MMOD).
License Apache License 2.0
Encoding UTF-8
LazyData true
Imports OpenMx
Suggests knitr, rmarkdown, testthat, tidyverse
VignetteBuilder knitr
RoxygenNote 7.1.1
Depends R (>= 2.10)
NeedsCompilation no
Author Kyle D. Husmann [aut, cre],
Timothy R. Brick [aut],
Ryne Estabrook [aut]
Maintainer Kyle D. Husmann <kdh38@psu.edu>
Repository CRAN
Date/Publication 2021-05-18 15:40:02 UTC

R topics documented:

mxMmodModel ......................................................... 2
nlsy97depression ................................................... 3

Index 4
mxMmodModel

Create an MMOD

Description
This function builds a Measurement Model of Derivatives (MMOD; Estabrook 2015) with a given factor structure.

Usage
mxMmodModel(
data, modelName, idvar, timevar, structure, orthogonal = F, embed_dim = NULL, fiml = F
)

Arguments
- data: a data frame with measurements in long format
- modelName: name for the resulting model
- idvar: name of column for subject IDs
- timevar: name of column for measurement occasion
- structure: factor structure, see 'Details'
- orthogonal: if true, fix correlations between factors to 0 (A factor and its derivatives will still intercorrelate)
- embed_dim: time delay embedding dimension
- fiml: if true, use raw data to fit model with FIML. Otherwise, fit using cov matrix (dropping missing values if necessary).

Details
The structure argument is a list of latent factors and their mappings to manifest variables. For example, a one factor structure would be:
list(F1 = c('m1','m2','m3','m4','m5','m6'))
And a two factor structure would be:
list(F1 = c('m1','m2','m3'),F2 = c('m4','m5','m6'))

Value
an MMOD as an mxModel object
Examples

```r
data(nlsy97depression)
# Fit one factor MMOD
structure <- list(F1 = c('nervous', 'down', 'depressed', 'calm', 'happy'))
mmod_model <- mxMmodModel(data=nlsy97depression,
    modelName='1 Factor MMOD',
    idvar='pid', timevar='occasion', structure=structure)
mmod_fit <- OpenMx::mxRun(mmod_model)
summary(mmod_fit)
```

nlsy97depression  

**NLSY97 Longitudinal Depression Scale Data**

Description

A 5-item depression scale used on the National Longitudinal Survey of Youth, 1997 sample (NLSY97). Individuals were assessed in 2000, 2002, and 2004. All items are assessed on a 4-point likert scale.

Usage

nlsy97depression

Format

A data frame with 26952 rows and 7 variables:

- **pid**  Unique ID of participant
- **sex**  Sex of participant
- **birth_m**  Birth Month
- **birth_y**  Birth Year
- **occasion**  Measurement occasion
- **nervous**  How often participant felt 'like a nervous person'
- **calm**  How often participant felt 'calm and peaceful'
- **down**  How often participant felt 'down or blue'
- **happy**  How often participant felt 'like a happy person'
- **depressed**  How often participant felt 'depressed'

Source

[https://www.bls.gov/nls/nlsy97.htm](https://www.bls.gov/nls/nlsy97.htm)
Index

∗ datasets
   nlsy97depression, 3

mxMmodModel, 2

nlsy97depression, 3