

Package ‘mvnormtest’

April 17, 2009

Version 0.1-7

Date 2009-01-08

Title Normality test for multivariate variables

Author Slawomir Jarek

Maintainer Slawomir Jarek <slawomir.jarek@gallus.edu.pl>

Description Generalization of shapiro-wilk test for multivariate variables.

License GPL

Depends stats

Repository CRAN

Date/Publication 2009-02-10 08:14:38

R topics documented:

mshapiro.test	1
Index	3

mshapiro.test	<i>Shapiro-Wilk Multivariate Normality Test</i>
---------------	---

Description

Performs the Shapiro-Wilk test for multivariate normality.

Usage

```
mshapiro.test(U)
```

Arguments

U a numeric matrix of data values, the number of which must be for each sample between 3 and 5000.

Value

A list with class "htest" containing the following components:

statistic the value of the Shapiro-Wilk statistic.
 p.value the p-value for the test.
 method the character string "Shapiro-Wilk normality test".
 data.name a character string giving the name(s) of the data.

Author(s)

Slawomir Jarek (slawomir.jarek@gallus.edu.pl)

References

Czeslaw Domanski (1998) Wlasnosci testu wielowymiarowej normalnosci Shapiro-Wilka i jego zastosowanie. *Cracow University of Economics Rector's Lectures*, **No. 37**.

Patrick Royston (1982) An Extension of Shapiro and Wilk's W Test for Normality to Large Samples. *Applied Statistics*, **31**, 115–124.

Patrick Royston (1982) Algorithm AS 181: The W Test for Normality. *Applied Statistics*, **31**, 176–180.

Patrick Royston (1995) A Remark on Algorithm AS 181: The W Test for Normality. *Applied Statistics*, **44**, 547–551.

See Also

[shapiro.test](#) for univariate samples, [qqnorm](#) for producing a normal quantile-quantile plot.

Examples

```
library(mvnormttest)
data(EuStockMarkets)

C <- t(EuStockMarkets[15:29,1:4])
mshapiro.test(C)

C <- t(EuStockMarkets[14:29,1:4])
mshapiro.test(C)

R <- t(diff(t(log(C))))
mshapiro.test(R)

dR <- t(diff(t(R)))
mshapiro.test(dR)
```

Index

*Topic **htest**

 mshapiro.test, 1

mshapiro.test, 1

qqnorm, 2

shapiro.test, 2