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May 7, 2026

Type Package

Title A Test for Comparing the Predictive Accuracy of Two Sets of Forecasts

Version 1.0

Date 2023-01-11

Description A non-parametric test founded upon the principles of the Kolmogorov-Smirnov (KS) test, referred to as the KS Predictive Accuracy (KSPA) test. The KSPA test is able to serve two distinct purposes. Initially, the test seeks to determine whether there exists a statistically significant difference between the distribution of forecast errors, and secondly it exploits the principles of stochastic dominance to determine whether the forecasts with the lower error also reports a stochastically smaller error than forecasts from a competing model, and thereby enables distinguishing between the predictive accuracy of forecasts. KSPA test has been described in : Hassani and Silva (2015) <doi:10.3390/econometrics3030590>.

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Depends stats

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NeedsCompilation no

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Repository CRAN

Date/Publication 2023-01-13 09:50:05 UTC

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KSPA *A Test for Comparing the Predictive Accuracy of Two Sets of Forecasts*

Description

This function introduces a complement statistical test for distinguishing between the predictive accuracy of two sets of forecasts. We propose a non-parametric test founded upon the principles of the Kolmogorov-Smirnov (KS) test, referred to as the KS Predictive Accuracy (KSPA) test. The KSPA test is able to serve two distinct purposes. Initially, the test seeks to determine whether there exists a statistically significant difference between the distribution of forecast errors, and secondly it exploits the principles of stochastic dominance to determine whether the forecasts with the lower error also reports a stochastically smaller error than forecasts from a competing model, and thereby enables distinguishing between the predictive accuracy of forecasts.

Usage

```
KSPA(Error1, Error2, method = c("abs", "sqe", "biqc"))
```

Arguments

`Error1`	the forecast errors from model 1.
`Error2`	the forecast errors from model 2.
`method`	character string specifying the used loss function (abs as absolute errors, sqe as square errors, or biqc as fourth power of errors).

Details

Input the forecast errors from two models. Let Error1 show errors from the model with the lower error based on some loss function.

Value

Draw histograms for the forecast errors from each model.

Plot the cdf of forecast errors from each model.

And a list.

`ks.oneside`	One-sided KSPA test
`ks.twoside`	Two-sided KSPA test.

Author(s)

Hossein Hassani and Emmanuel Sirimal Silva and Leila Marvian Mashhad.

References

Hassani, H., & Silva, E. S. (2015). A Kolmogorov-Smirnov based test for comparing the predictive accuracy of two sets of forecasts. Econometrics, 3(3), 590-609.

See Also

ks.test

Examples

```
x <- rnorm(40); y <- runif(30)
KSPA(x, y, method = "sqe")
```

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