Package 'svenssonm'

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Type Package

Title Svensson's Method

Version 0.1.0

Description Obtain parameters of Svensson's Method, including percentage agreement, systematic change and individual change. Also, the contingency table can be generated. Svensson's Method is a rank-invariant nonparametric method for the analysis of ordered scales which measures the level of change both from systematic and individual aspects. For the details, please refer to Svensson E. Analysis of systematic and random differences between paired ordinal categorical data [dissertation]. Stockholm: Almqvist & Wiksell International; 1993.

License GPL-3

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R topics documented:

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con_ta   *Contingency Table Generation*

Description

Generate Contingency table for Svensson's Method

Usage

```
con_ta(x, y, level = 5)
```

Arguments

x	a numeric vector of data values, each element range from 1 to level.
y	a numeric vector of data values, must have same length as x.
level	the dimension of the contingency table, the default is 5.

Value

A contingency table based on x and y.

See Also

[sresult](#) for summary of Svensson's method analysis.

Examples

```
x <- c (1:5,5:1)
y <- c(1:5,1,1,5,4,1)
con_ta(x,y,)
```

---

indichange   *Individual Change*

Description

In Svensson's method, the individual change is described by the relative rank variance (RV), the observable part, and the internal rank variance (IV), the unobservable part, together. A measure of the closeness of observations to the rank transformable pattern of change is defined as the augmented correlation coefficient (ralpha) and its p-value.

Usage

```
rv(t)

rvse(t)

iv(t)

ralpha(t)

pralpha(t)
```

Arguments

t   The contingency table for Svensson's method, a two-dimension matrix.

Value

rv and iv give the RV and IV value. rvse gives the standard error of RV. ralpha and pralpha give the augmented correlation coefficient and the corresponding p-value.

See Also

[con_ta](#) for generating contingency table. [syschange](#) for systematic change. [sresult](#) for summary of Svensson's method analysis.

Examples

```
x <- c (1:5,5:1)
y <- c(1:5,1,1,5,4,1)
z <- con_ta(x,y,)
rv(z)
rvse(z)
iv(z)
ralpha(z)
pralpha(z)
```

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pa   *Percentage Agreement*

Description

The percentage agreement (PA) which shows the proportion of the subjects who did not change their choices.

Usage

```
pa(t)
```

Arguments

t   The contingency table for Svensson's method, a two-dimension matrix.

Value

pa gives the PA value, multiply by 100 to get a percentage number.

See Also

[con_ta](con_ta) for generating contingency table. sresult for summary of Svensson's method analysis.

Examples

```
x <- c (1:5,5:1)
y <- c(1:5,1,1,5,4,1)
z <- con_ta(x,y,)
pa(z)
```

---

sresult   *Summary for Svensson's Method*

Description

List all the results for Svensson's Method. Including percentage agreement, systematic change and individual change.

Usage

```
sresult(t)
```

Arguments

t   The contingency table for Svensson's method, a two-dimension matrix.

Value

sresult lists the results for Svensson's method. PA for percentage agreement, RP for relative position, RC for relative concentration, RV for relative rank variance, SE(RP), SE(RC), SE(RV) for the corresponding standard error and CI(RP), CI(RC), CI(RV) for the 95% confidence interval. IV for internal rank variance, R.Alpha for augmented correlation coefficient, P.R.Alpha for the corresponding p-value (significant level 0.05).

See Also

[con_ta](con_ta) for generating contingency table.

Examples

```
x <- c (1:5,5:1)
y <- c(1:5,1,1,5,4,1)
z <- con_ta(x,y,)
sresult(z)
```

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syschange   *Systematic Change*

Description

The value and the standard error of relative position (RP), the systematic change in position be-
tween the two ordered categorical classification. Also, the value and the standard error of relative
concentration (RC), a comprehensive evaluation of the systematic change.

Usage

```
rp(t)

rpse(t)

rc(t)

rcse(t)
```

Arguments

t   The contingency table for Svensson's method, a two-dimension matrix.

Value

rp and rc give the RP and RC value. rpse and rcse give the standard error of RP and RC.

See Also

[con_ta](#) for generating contingency table. [indichange](#) for individual change. [sresult](#) for summary
of Svensson's method analysis.

Examples

```
x <- c (1:5,5:1)
y <- c(1:5,1,1,5,4,1)
z <- con_ta(x,y,)
rp(z)
rpse(z)
rc(z)
rcse(z)
```

Index