Package 'micEconIndex'

June 21, 2022

Version 0.1-8

Date 2022-06-20

Title Price and Quantity Indices

Author Arne Henningsen

Maintainer Arne Henningsen <arne.henningsen@gmail.com>

Depends R (>= 2.4.0)

Imports miscTools (>= 0.6-1)

Suggests Ecdat (>= 0.1-5), micEcon (>= 0.6-12)

Description Tools for calculating Laspeyres, Paasche, and Fisher
     price and quantity indices.

License GPL (>= 2)

URL http://www.micEcon.org

NeedsCompilation no

Repository CRAN

Date/Publication 2022-06-21 11:30:05 UTC

R topics documented:

---

priceIndex   *Calculate Price Indices*

Description

Calculates a Laspeyres, Paasche or Fisher price index.

Usage

```
priceIndex( prices, quantities, base, data, method = "Laspeyres",
   na.rm = FALSE, weights = FALSE )
```

Arguments

prices	Vector that contains the names of the prices.
quantities	Vector that contains the names of the quantities that belong to the `prices`.
base	The base period(s) to calculate the indices (see details).
data	Dataframe that contains the prices and quantities.
method	Which price index: "Laspeyres", "Paasche" or "Fisher".
na.rm	a logical value passed to 'mean()' when calculating the base.
weights	logical. Should an attribute 'weights' that contains the relatives weights of each quantity be added?

Details

The argument base can be either
(a) a single number: the row number of the base prices and quantities,
(b) a vector indicating several observations: The means of these observations are used as base prices and quantities, or
(c) a logical vector with the same length as the `data`: The means of the observations indicated as 'TRUE' are used as base prices and quantities.

If any values used for calculating the price index (e.g. current quantities, base quantities, current prices or base prices) are not available (NA), they are ignored (only) if they are multiplied by zero.

Value

a vector containing the price indices.

Author(s)

Arne Henningsen

See Also

quantityIndex.

Examples

```
if( requireNamespace( 'micEcon', quietly = TRUE ) ) {
   data( Missong03E7.7, package = "micEcon" )
   # Laspeyres Price Indices
   priceIndex( c( "p.beef", "p.veal", "p.pork" ),
      c( "q.beef", "q.veal", "q.pork" ), 1, Missong03E7.7 )
   # Paasche Price Indices
   priceIndex( c( "p.beef", "p.veal", "p.pork" ),
      c( "q.beef", "q.veal", "q.pork" ), 1, Missong03E7.7, "Paasche" )

   data( Bleymueller79E25.1, package = "micEcon" )
   # Laspeyres Price Indices
   priceIndex( c( "p.A", "p.B", "p.C", "p.D" ), c("q.A", "q.B", "q.C", "q.D" ),
      1, Bleymueller79E25.1 )
   # Paasche Price Indices
   priceIndex( c( "p.A", "p.B", "p.C", "p.D" ), c("q.A", "q.B", "q.C", "q.D" ),
      1, Bleymueller79E25.1, "Paasche" )
}
```

---

quantityIndex   *Calculate Quantity Indices*

Description

Calculates a Laspeyres, Paasche or Fisher Quantity index.

Usage

```
quantityIndex( prices, quantities, base, data, method = "Laspeyres",
   na.rm = FALSE, weights = FALSE )
```

Arguments

prices	Vector that contains the names of the prices.
quantities	Vector that contains the names of the quantities that belong to the prices.
base	The base period(s) to calculate the indices (see details).
data	Dataframe that contains the prices and quantities.
method	Which quantity index: "Laspeyres", "Paasche" or "Fisher".
na.rm	a logical value passed to 'mean()' when calculating the base.
weights	logical. Should an attribute 'weights' that contains the relatives weights of each quantity be added?

Details

The argument base can be either
(a) a single number: the row number of the base prices and quantities,
(b) a vector indicating several observations: The means of these observations are used as base prices and quantities, or
(c) a logical vector with the same length as the data: The means of the observations indicated as 'TRUE' are used as base prices and quantities.

If any values used for calculating the quantity index (e.g. current quantities, base quantities, current prices or base prices) are not available (NA), they are ignored (only) if they are multiplied by zero.

Value

a vector containing the quantity indices.

Author(s)

Arne Henningsen

See Also

[quantityIndex](#).

Examples

```
if( requireNamespace( 'micEcon', quietly = TRUE ) ) {
   data( Missong03E7.7, package = "micEcon" )
   # Laspeyres Quantity Indices
   quantityIndex( c( "p.beef", "p.veal", "p.pork" ),
      c( "q.beef", "q.veal", "q.pork" ), 1, Missong03E7.7 )
   # Paasche Quantity Indices
   quantityIndex( c( "p.beef", "p.veal", "p.pork" ),
      c( "q.beef", "q.veal", "q.pork" ), 1, Missong03E7.7, "Paasche" )

   data( Bleymueller79E25.1, package = "micEcon" )
   # Laspeyres Quantity Indices
   quantityIndex( c( "p.A", "p.B", "p.C", "p.D" ), c("q.A", "q.B", "q.C", "q.D" ),
      1, Bleymueller79E25.1 )
   # Paasche Quantity Indices
   quantityIndex( c( "p.A", "p.B", "p.C", "p.D" ), c("q.A", "q.B", "q.C", "q.D" ),
      1, Bleymueller79E25.1, "Paasche" )
}
```

Index