

Package ‘gvc’

June 19, 2022

Version 6.4.0

Title Global Value Chains Tools

Description Several tools for Global Value Chain ('GVC') analysis are implemented.

Maintainer Bastiaan Quast <bquast@gmail.com>

Depends R (>= 3.5.0)

License GPL-3

URL <https://qua.st/gvc>, <https://github.com/bquast/gvc>

BugReports <https://github.com/bquast/gvc/issues>

Imports decompr, diagonals

Suggests testthat, knitr, rmarkdown

VignetteBuilder knitr

RoxygenNote 7.2.0

Encoding UTF-8

NeedsCompilation no

Author Bastiaan Quast [aut, cre] (<<https://orcid.org/0000-0002-2951-3577>>),
Victor Kummritz [aut]

Repository CRAN

Date/Publication 2022-06-19 17:50:02 UTC

R topics documented:

dfddva	2
dfdfva	3
downstream	3
e2r	4
ffddva	5
gvc	6
i2e	6
nrca	7
upstream	8

dfddva	<i>Domestic Final Demand Domestic Value Added</i>
--------	---

Description

Domestic Final Demand Domestic Value Added

Usage

```
dfddva(x, aggregate = FALSE)
```

Arguments

x	A Leontief decomposed Inter-Country Input Output table as created by <code>decompr</code> , which should be post multiplied with final demand (using the parameter: <code>post="final_demand"</code>)
aggregate	should dfddva be aggregated along source industries to a national sum?

Examples

```
# load the decompr package
library(decompr)

# load example data
data(leather)
attach(leather)

# create a leontief decomposed data set
l <- decompr(x = inter,
             y = final,
             k = countries,
             i = industries,
             o = out,
             method = "leontief",
             post = "final_demand")

# apply dfddva
dfddva( l )
```

dfdfva	<i>Domestic Final Demand Foreign Value Added</i>
--------	--

Description

Domestic Final Demand Foreign Value Added

Usage

```
dfdfva(x, aggregate = FALSE)
```

Arguments

x	A Leontief decomposed Inter-Country Input Output table as created by decomp, which should be post multiplied with final demand (using the parameter: post="final_demand")
aggregate	should dfddva be aggregated along source industries to a national sum?

Examples

```
# load the decomp package
library(decomp)

# load the example data
data(leather)
attach(leather)

# create a leontief decomposed data set
l <- decomp(x = inter,
            y = final,
            k = countries,
            i = industries,
            o = out,
            method = "leontief",
            post = "final_demand")

# apply dfdfva
dfdfva( l )
```

downstream	<i>Downstreamness</i>
------------	-----------------------

Description

Downstreamness

Usage

```
downstream(x)
```

Arguments

`x` an object of class "decompr" as created using the `load_tables_vectors()` function from the `decompr` package.

Examples

```
# load the decompr package
library(decompr)

# load example data
data(leather)
attach(leather)

# create a leontief decomposed data set
l <- load_tables_vectors(x = inter,
                        y = final,
                        k = countries,
                        i = industries,
                        o = out      )

# apply downstream
downstream( l )
```

e2r

Exporting to Re-export

Description

Exporting to Re-export

Usage

```
e2r(x, by = NULL, subset = NULL)
```

Arguments

`x` A Leontief decomposed Inter-Country Input Output table as created by `decompr`

`by` variable to subset by

`subset` value(s) of the subset variable to select

Examples

```
# load the decompr package
library(decompr)

# load the example data set
data(leather)
attach(leather)

# create a leontief decomposed data set
l <- decompr(x = inter,
             y = final,
             k = countries,
             i = industries,
             o = out)

# apply the Exporting to Re-export
e2r( l )
```

ffddva

*Foreign Final Demand Domestic Value Added***Description**

Foreign Final Demand Domestic Value Added

Usage

```
ffddva(x, aggregate = FALSE)
```

Arguments

x	A Leontief decomposed Inter-Country Input Output table as created by decompr, which should be post multiplied with final demand (using the parameter: post="final_demand")
aggregate	should dfddva be aggregated along source industries to a national sum?

Examples

```
# load the decompr package
library(decompr)

# load example data
data(leather)
attach(leather)

# create a leontief decomposed data set
l <- decompr(x = inter,
             y = final,
             k = countries,
```

```

      i = industries,
      o = out,
      method = "leontief",
      post = "final_demand")

# apply ffddva
ffddva( 1 )

```

gvc

Global Value Chain analysis

Description

Several tools for Global Value Chain ('GVC') analysis are implemented.

Author(s)

Bastiaan Quast <bquast@gmail.com> Victor Kummritz

References

Wang, Zhi, Shang-Jin Wei, and Kufu Zhu. Quantifying international production sharing at the bilateral and sector levels. No. w19677. National Bureau of Economic Research, 2013.

See Also

<https://qua.st/decompr>

i2e

Importing to Export

Description

Importing to Export
 Vertical Specialization
 Vertical Specialisation

Usage

```

i2e(x, by = NULL, subset = NULL)

vertical_specialisation(x, by = NULL, subset = NULL)

vertical_specialization(x, by = NULL, subset = NULL)

```

Arguments

x A Leontief decomposed Inter-Country Input Output table as created by decompr
 by variable to subset by
 subset value(s) of the subset variable to select

Examples

```
# load the decompr package
library(decompr)

# load the example data set
data(leather)
attach(leather)

# create a leontief decomposed data set
l <- decompr(x = inter,
             y = final,
             k = countries,
             i = industries,
             o = out)

# apply the Import to Exports analysis
i2e( l )
```

 nrca

New Revealed Comparative Advantage

Description

New Revealed Comparative Advantage

Usage

```
nrca(x)
```

Arguments

x A decomposed Inter-Country Input Output table as created by decompr

Examples

```
# load the decompr package
library(decompr)

# load the example data set
data(leather)
attach(leather)
```

```
# perform Leontief decomposition
l <- decomp(x = inter,
           y = final,
           k = countries,
           i = industries,
           o = out,
           method = "leontief",
           post = "exports" )

# load gvc package
library(gvc)

# perform New Revealed Comparative Advantage
nrca(l)
```

upstream

Upstreamness

Description

Upstreamness

Usage

```
upstream(x)
```

Arguments

x an object of class "decompr" as created using the load_tables_vectors() function from the decompr package.

Examples

```
# load the decompr package
library(decompr)

# load example data
data(leather)
attach(leather)

# create a leontief decomposed data set
l <- load_tables_vectors(x = inter,
                       y = final,
                       k = countries,
                       i = industries,
                       o = out )

# apply upstream
upstream( l )
```

Index

dfddva, [2](#)
dfdfva, [3](#)
downstream, [3](#)

e2r, [4](#)

ffddva, [5](#)

gvc, [6](#)

i2e, [6](#)

nrca, [7](#)

upstream, [8](#)

vertical_specialisation (i2e), [6](#)

vertical_specialization (i2e), [6](#)