

# Package ‘gvc’

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**Version** 6.2.1

**Title** Global Value Chains Tools

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

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**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** 7.1.2

**Encoding** UTF-8

**NeedsCompilation** no

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**Repository** CRAN

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dfddva	<i>Domestic Final Demand Domestic Value Added</i>
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### 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 )
```

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dfdfva	<i>Domestic Final Demand Foreign Value Added</i>
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**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 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 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 )
```

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downstream	<i>Downstreamness</i>
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**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 )
```

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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 <- decomp(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 <- decomp(x = inter,
            y = final,
            k = countries,
```

```

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

# apply ffddva
ffddva( 1 )

```

---

gvc

*Global Value Chain analysis*


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### 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>

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i2e

*Importing to Export*


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### 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 )
```

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 nrca

*New Revealed Comparative Advantage*


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**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)
```

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upstream

*Upstreamness*

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## 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 )
```



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