

# Package ‘oec’

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**Type** Package

**Title** Use the Observatory of Economic Complexity's API in R

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**URL** <http://atlas.media.mit.edu/en/>, <https://github.com/pachamaltese/oec/>

**Description** Use The Observatory of Economic Complexity's API in R to download international trade data in csv and create and D3Plus visualizations.

**License** MIT + file LICENSE

**LazyData** TRUE

**Depends** curl,  
data.table,  
jsonlite,  
plyr,  
servr

**RoxygenNote** 5.0.1

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oec-package	<i>The Observatory of Economic Complexity</i>
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## Description

Use The Observatory of Economic Complexity's API from R console to obtain international trade data to create spreadsheets (csv format) and D3Plus visualizations.

## Details

The functions provided within this package are:

[install\\_d3plus](#) Installs D3 and D3Plus.

[demos](#) Copies the demo file.

[getdata](#) Downloads and processes the data from the API.

[network](#) Creates a network for a given year.

[network\\_comparison](#) Creates a network to compare two years.

[treemap](#) Creates a treemap for a given year.

The datasets provided within this package are:

[countries\\_list](#) A list of all the countries in the world and its respective country code.

[hs92\\_2char](#) HS92 groups. This file is used to create spreadsheets and visualizations with trade data.

[hs92\\_6char](#) HS92 products (6 characters codes). This file is used to create spreadsheets and visualizations with trade data.

[hs92\\_8char](#) HS92 products (8 characters codes). This file is used to create spreadsheets and visualizations with trade data.

[hs92\\_colors](#) HS92 colors. This file is used to create spreadsheets and visualizations based on trade data.

[sitc\\_rev2\\_2char](#) SITC (rev. 2) groups. This file is used to create spreadsheets and visualizations with trade data.

[sitc\\_rev2\\_4char](#) SITC (rev. 2) products (4 characters codes). This file is used to create spreadsheets and visualizations with trade data.

[sitc\\_colors](#) SITC (rev. 2) colors. This file is used to create spreadsheets and visualizations with trade data.

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<code>countries_list</code>	<i>A list of all the countries</i>
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**Description**

A list of all the countries in the world and its country code. You need the country code (e.g. chl) to obtain data of a country (e.g Chile)

**Usage**

```
countries_list
```

**Format**

A data frame with 262 observations on the following 2 variables.

`country` the full names of the countries

`country_code` the ids of the countries

**Examples**

```
countries_list
```

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<code>demos</code>	<i>Copies the demo file</i>
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**Description**

Copies the demo file

**Usage**

```
demos()
```

**Value**

Copies a file named `demo_examples.R` to the working directory.

**Examples**

```
# demos()
```

---

getdata

*Downloads and processes the data from the API*


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### Description

Downloads and processes the data from the API

### Usage

```
getdata(origin, destination, classification, year)
```

### Arguments

origin	is the country code of origin (e.g. "chl" for Chile)
destination	is the country code of origin (e.g. "chn" for China)
classification	refers to the trade classification that can be "6" (HS92 6 characters) or "8" (HS92 8 characters) for the year 1995 and going or "4" (SITC rev.2 4 characters) for the year 1962 and ongoing
year	is the year and the OEC's API ranges from 1962 to 2014

### Examples

```
# Run countries_list() to display the full list of countries
# Chile is "chl" and China is "chn"

# Download trade data from OEC's API (HS92 6 characters product lists)
# getdata("chl", "chn", 6, 2010)

# Download trade data from OEC's API (HS92 8 characters product lists)
# getdata("chl", "chn", 8, 2010)

# Download trade data from OEC's API (SITC rev.2 4 characters product lists)
# getdata("chl", "chn", 4, 2010)
```

---

getdata\_interval

*Downloads and processes the data from the API*


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### Description

Downloads and processes the data from the API

### Usage

```
getdata_interval(origin, destination, classification, first_year, last_year,
  interval)
```

**Arguments**

origin	is the country code of origin (e.g. "chl" for Chile)
destination	is the country code of origin (e.g. "chn" for China)
classification	refers to the trade classification that can be "6" (HS92 6 characters) or "8" (HS92 8 characters) for the year 1995 and going or "4" (SITC rev.2 4 characters) for the year 1962 and ongoing
first_year	is the first year and the OEC's API ranges from 1962 to 2014
last_year	is the last year and the OEC's API ranges from 1962 to 2014
interval	is an optional parameter to define the distance between years (by default set to 1)

**Examples**

```
# Run countries_list() to display the full list of countries
# Chile is "chl" and China is "chn"

# Download trade data from OEC's API (HS92 6 characters product lists)
# for the years 2010, 2012 and 2014
# getdata_interval("chl", "chn", 6, 2010, 2014, 2)

# Download trade data from OEC's API (HS92 8 characters product lists)
# for the years 2010, 2012 and 2014
# getdata_interval("chl", "chn", 8, 2010, 2014, 2)

# Download trade data from OEC's API (SITC rev.2 4 characters product lists)
# for the years 2010, 2012 and 2014
# getdata_interval("chl", "chn", 4, 2010, 2014, 2)
```

hs92\_2char

*HS92 groups***Description**

HS92 groups. This file is used to create the visualizations.

**Usage**

```
hs92_2char
```

**Format**

A data frame with 22 observations on the following 2 variables.

group Contains the H292 groups (e.g. animal products, vegetable products, etc)

hs92\_group Contains the associated codes of every group (e.g. animal products is 01)

**Examples**

```
hs92_2char
```

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hs92_6char	<i>HS92 products (6 characters)</i>
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### Description

HS92 products (6 characters). This file is used to create the visualizations.

### Usage

hs92\_6char

### Format

A data frame with 1242 observations on the following 4 variables.

product Contains the H292 products' names (e.g. horses, bovine, pigs, etc)

group Contains the H292 groups (e.g. animal products, vegetable products, etc)

hs92\_id Contains the associated codes of every product (e.g. horses is 010101)

hs92\_group Contains the associated codes of every group (e.g. animal products is 01)

### Examples

hs92\_6char

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hs92_8char	<i>HS92 products (8 characters)</i>
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### Description

HS92 products (8 characters). This file is used to create the visualizations.

### Usage

hs92\_8char

### Format

A data frame with 5040 observations on the following 4 variables.

product Contains the H292 products' names (e.g. horses, bovine, pigs, etc)

group Contains the H292 groups (e.g. animal products, vegetable products, etc)

hs92\_id Contains the associated codes of every product (e.g. horses is 010101)

hs92\_group Contains the associated codes of every group (e.g. animal products is 01)

### Examples

hs92\_8char

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hs_colors	<i>HS92 colors</i>
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**Description**

HS92 colors. This file is used to create the visualizations.

**Usage**

```
hs_colors
```

**Format**

A data frame with 21 observations on the following 2 variables.

group Contains the H292 groups (e.g. animal products, vegetable products, etc)

color Contains the associated colors of every group (e.g. mineral products is #330000)

**Examples**

```
hs_colors
```

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install_d3plus	<i>Installs D3 and D3Plus</i>
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**Description**

Installs D3 and D3Plus

**Usage**

```
install_d3plus()
```

**Value**

Copies a folder named d3plus to the working directory and it contains the js files and icons to make the visualizations

**Examples**

```
# install_d3plus()
```

---

network	<i>Creates a network for a given year</i>
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**Description**

Creates a network for a given year

**Usage**

```
network(origin, destination, classification, year)
```

**Arguments**

origin	is the country code of origin (e.g. "chl" for Chile)
destination	is the country code of origin (e.g. "chn" for China)
classification	refers to the trade classification that can be "6" (HS92 6 characters) or "8" (HS92 8 characters) for the year 1995 and going or "4" (SITC rev.2 4 characters) for the year 1962 and ongoing
year	is the year and the OEC's API ranges from 1962 to 2014

**Value**

Creates an HTML file with a network visualization for a given year.

**Examples**

```
# network("chl", "chn", 6, 2014)
```

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network_comparison	<i>Creates a network to compare two years</i>
--------------------	---

---

**Description**

Creates a network to compare two years

**Usage**

```
network_comparison(origin, destination, classification, year1, year2)
```

**Arguments**

origin	is the country code of origin (e.g. "chl" for Chile)
destination	is the country code of origin (e.g. "chn" for China)
classification	refers to the trade classification that can be "6" (HS92 6 characters) or "8" (HS92 8 characters) for the year 1995 and going or "4" (SITC rev.2 4 characters) for the year 1962 and ongoing
year1	is the initial year and the OEC's API ranges from 1962 to 2014
year2	is the final year and the OEC's API ranges from 1962 to 2014



**Value**

Creates an HTML file with a network visualization that compares two given years.

**Examples**

```
# network_comparison("chl", "chn", 6, 2010, 2014)
```

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sitc_colors	<i>SITC (rev. 2) colors</i>
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**Description**

SITC (rev. 2) colors. This file is used to create the visualizations.

**Usage**

```
hs_colors
```

**Format**

A data frame with 36 observations on the following 2 variables.

group Contains the SITC (rev. 2) groups (e.g. machinery, electronics, etc)

color Contains the associated colors of every group (e.g. machinery is #17bcef)

**Examples**

```
sitc_colors
```

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sitc_rev2_2char	<i>SITC (rev. 2) groups</i>
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---

**Description**

SITC (rev. 2) groups. This file is used to create the visualizations.

**Usage**

```
hs92_2char
```

**Format**

A data frame with 36 observations on the following 2 variables.

group Contains the SITC (rev. 2) groups (e.g. machinery, electronics, etc)

sitc\_rev2\_group Contains the associated codes of every group (e.g. machinery is 10)

**Examples**

```
sitc_rev2_2char
```

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sitc_rev2_4char	<i>SITC (rev. 2) products (4 characters)</i>
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**Description**

SITC (rev. 2) products (4 characters). This file is used to create the visualizations.

**Usage**

```
sitc_rev2_4char
```

**Format**

A data frame with 1242 observations on the following 5 variables.

`product` Contains the H292 products' names (e.g. initiating devices, polymerization ion exchangers, etc)

`group` Contains the H292 groups (e.g. machinery, electronics products, etc)

`sitc_rev2_prod` Contains the associated codes of every product (e.g. initiating devices is 5722)

`sitc_rev2_group` Contains the associated codes of every group (e.g. machinery is 10)

`sitc_rev2_id` Contains the associated extended codes of every group (e.g. machinery is 105722 that is sitc group + sitc id)

**Examples**

```
sitc_rev2_4char
```

---

treemap	<i>Creates a treemap for a given year</i>
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**Description**

Creates a treemap for a given year

**Usage**

```
treemap(origin, destination, variable, classification, year, depth)
```

**Arguments**

`origin` is the country code of origin (e.g. "chl" for Chile)

`destination` is the country code of origin (e.g. "chn" for China)

`variable` is the variable to visualize and it can be "imports", "exports" or "exchange" (trade exchange)

`classification` refers to the trade classification that can be "6" (HS92 6 characters) or "8" (HS92 8 characters) for the year 1995 and going or "4" (SITC rev.2 4 characters) for the year 1962 and ongoing

`year` is the year and the OEC's API ranges from 1962 to 2014

`depth` is an optional parameter that can take values "0" (group's detail) or "1" (product's detail)

**Value**

Creates an HTML file with a treemap visualization for a given year.

**Examples**

```
# treemap("chl", "chn", "exports", 6, 2014)
```

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treemap_interval	<i>Creates a treemap for a given given period of years</i>
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---

**Description**

Creates a treemap for a given given period of years

**Usage**

```
treemap_interval(origin, destination, variable, classification, first_year,
  last_year, interval, depth)
```

**Arguments**

origin	is the country code of origin (e.g. "chl" for Chile)
destination	is the country code of origin (e.g. "chn" for China)
variable	is the variable to visualize and it can be "imports", "exports" or "exchange" (trade exchange)
classification	refers to the trade classification that can be "6" (HS92 6 characters) or "8" (HS92 8 characters) for the year 1995 and going or "4" (SITC rev.2 4 characters) for the year 1962 and ongoing
first_year	is the first year and the OEC's API ranges from 1962 to 2014
last_year	is the last year and the OEC's API ranges from 1962 to 2014
interval	is an optional parameter to define the distance between years (by default set to 1)
depth	is an optional parameter that can take values "0" (group's detail) or "1" (product's detail), by defaults its set to 1

**Value**

Creates an HTML file with a treemap visualization for a given period of years.

**Examples**

```
# treemap_interval("chl", "chn", "exports", 6, 2010, 2014, 2)
```

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