# Package 'cbsots'

February 23, 2023

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Type Package
Title CBS Open Timeseries
Version 1.8.0
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Description Tools from downloading timeseries using the cbsodataR package.
License GPL-3
RoxygenNote 7.2.3
Roxygen list(markdown = TRUE, old_usage = TRUE)
Depends R (>= 3.5.0),
     regts
Imports cbsodataR (>= 0.2.5),
     data.table,
     openxlsx (>= 4.2.2),
     shiny,
     shinyjqui (>= 0.4.0),
     htmlwidgets,
     jsonlite,
     shinyalert,
     stringdist,
     utils,
     stringr,
     stats
Suggests testthat,
     knitr,
     rmarkdown,
     R.rsp
VignetteBuilder knitr,
     R.rsp
```

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edit\_ts\_code

Edit timeseries codes

#### **Description**

Edit timeseries codes

#### Usage

```
edit_ts_code(ts_code_file, use_browser = TRUE, browser, debug = FALSE,
  base_url = NULL)
```

### Arguments

ts\_code\_file the name of a file where the timeseries coding is stored. This file does not have to exist yet. If it does exist, then it should be an rds file containing a ts\_code

object.

if TRUE (the default), then display the graphical user interface in the browser. use\_browser

Otherwise the RStudio viewer is used.

a character vector specifying the path of the browser. Specify "default" to browser

> use the default browser. The approach used when this argument has not been specified depends on the operating system. For non-Windows operating systems, the default browser is also used if argument browser has not been specified. For Windows, a different approach is used because the Shiny app does not work well in the Internet Explorer. The function tries to find the location of Chrome or FireFox and if the search is succesful then this browser is used.

Otherwise an error is issued.

debug a logical. If TRUE, then use the debugging mode (only for developpers)

optionally specify a different server. Useful for third party data services implebase url

menting the same protocol.

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```
fill_tables_from_table
```

Fill tables with values from another table.

### **Description**

This function fills in the Select and Code fields from a base table based on common Keys or Titles. The function tries to find matching keys or titles and updates the corresponding Select en Code fields. The function creates a match report in directory match\_reoport for each table and dimension. The match report is an Excel file with a name composed of the table id of the base table and the new table, and the and the dimension, e.g. 83186NED\_83361NED\_TypeZelfstandige.xlsx. This function is still experimental and you should always check the results carefully.

#### Usage

```
fill_tables_from_table(ts_code, ids, base_id, base_url = NULL)
```

#### **Arguments**

ts_code	a ts_code object. This object can be created and modified with function edit_ts_code, which starts a Shiny app
ids	ids of tables to be filled from the base tabel
base_id	the id of the base table
base_url	optionally specify a different server. Useful for third party data services implementing the same protocol.

aet	ts	Return	<b>CBS</b>	timeseries

# Description

Return CBS timeseries

## Usage

```
get_ts(id, ts_code, refresh = FALSE, raw_cbs_dir = "raw_cbs_data",
  include_meta = TRUE, min_year = NULL, frequencies = NULL, download,
  base_url = NULL, download_all_keys = FALSE)
```

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#### **Arguments**

id table id

ts\_code a ts\_code object. This object can be created and modified with function

edit\_ts\_code, which starts a Shiny app.

refresh should the data in directory raw\_cbs\_dir be refreshed? If TRUE, the data

are always downloaded from the CBS website. Otherwise the data will only be downloaded if the corresponding files in directory raw\_cbs\_dir are missing or not complete (missing dimension keys). The default is FALSE. Note that data may also be downloaded when new keys are selected in the timeseries coding.

raw\_cbs\_dir directory where the raw downloaded data are stored.

include\_meta include meta data (the default is TRUE)

min\_year the minimum year of the returned timeseries. Data for years before min\_year

are disregarded. Specify NULL or NA to not impose a minimum year

frequencies a character string specifying the frequencies of the returned timeseries. Specify

"Y", "H", "Q" or "M" for annual, semi-annual, quarterly or monthly series, respectively. It is possible to specify a combination of these characters, e.g. "YQ" for annual and quarterly series. Another example: to retrieve annual, quarterly and monthly series simultaneously, specify "YQM". The function returns a list

with a component for each specified frequency.

download This argument overrules argument refresh. If FALSE, then data all never

downloaded again. You will get an error if the files in directory raw\_cbs\_dir are missing or not complete (missing dimension keys). If TRUE then data are

always downloaded.

base\_url optionally specify a different server. Useful for third party data services imple-

menting the same protocol.

download\_all\_keys

This option specifies how to download data. By default, for each table dimension (excluding the topic) only the selected keys in the timeseries coding are downloaded. Although this can significantly reduce downloading time, this approach has the disadvantage that it is necessary to download the data again when a new dimension key is selected in the timeseries coding. To prevent that, use argument download\_all\_keys = TRUE, then all keys are downloaded for each dimension.

## Value

a list with class table\_ts, with the following components

Y Annual timeseries (if present)

H Semi-annual timeseries (if present)

Q Quarterly timeseries (if present)

M Monthly timeseries (if present)

ts\_names A data frame with an overview of the timeseries names

meta Meta data, only if argument include\_meta is TRUE

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update_tables	Update tables
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#### Description

This function updates one or more tables in a ts\_code object. The function downloads the latest meta data from the CBS website and tries to find matching keys or titles in the old and new table. The function creates a match report in directory match\_reoport for each table and dimension. The match report is an Excel file with a name composed of the table id and dimension, e.g. 81810NED\_Topic.xlsx. This function is still experimental and you should always check the results carefully.

#### Usage

```
update_tables(ts_code, ids, base_url = NULL)
```

## Arguments

ts_code	a ts_code object. This object can be created and modified with function edit_ts_code, which starts a Shiny app
ids	ids of tables to be updated
base_url	optionally specify a different server. Useful for third party data services implementing the same protocol.

```
write_table_ts_xlsx
```

Writes the timeseries returned by function get\_ts to an Excel file.

#### **Description**

Writes the timeseries returned by function get\_ts to an Excel file.

## Usage

```
write_table_ts_xlsx(x, file, rowwise = TRUE, ...)
```

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