Package ‘tidyqwi’

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**Title**  A Convenient API for Accessing United States Census Bureau's Quarterly Workforce Indicator

**Version**  0.1.1

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**Description**  The purpose of this package is to access the United States Census Bureau's Quarterly Workforce Indicator data. Additionally, the data will be retrieved in a tidy format for further manipulation with full variable descriptions added if desired. Information about the United States Census Bureau's Quarterly Workforce Indicator is available at &lt;https://www.census.gov/data/developers/data-sets/qwi.html&gt;.

**Depends**  R (>= 3.0), future (>= 1.6.2)

**Imports**  dplyr, htr, jsonlite, magrittr, xml2, stringr, purrr, stats, tidyr, labelled, furrr

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**BugReports**  https://github.com/medewitt/tidyqwi/issues

**Encoding**  UTF-8

**LazyData**  true

**RoxygenNote**  6.1.1

**Suggests**  testthat, covr, knitr, rmarkdown

**VignetteBuilder**  knitr

**NeedsCompilation**  no

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**Repository**  CRAN

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### add_qwi_labels

**Description**

This function add labels to a `qwi` object

**Usage**

```r
add_qwi_labels(df)
```

**Arguments**

- `df` an object with a class of `qwi`

**Examples**

```r
library(tidyqwi)

# Add labels
labelled_nc <- add_qwi_labels(nc_qwi)

# Check the label for the data
attr(labelled_nc[['Emp']][, 'label'])
```
check_census_api_call  

A helper function to help parse API calls from the census

**Description**

A helper function to help parse API calls from the census

**Usage**

```r
check_census_api_call(call)
```

**Arguments**

- `call` a returned call from the US Census API

**Examples**

```r
library(tidyquant)
library(httr)
# A single call to the API without an API Key
url <- "api.census.gov/data/tables?q=sa?get=Emp&for=county:1988&key=NOKEY"
single_call <- httr::GET(url)

# Because a non valid API key was specified an message will be returned
check_census_api_call(single_call)
```

converted_fips  

A function to check if a valid state number or fips is passed

**Description**

A function to check if a valid state number or fips is passed

**Usage**

```r
converted_fips(fips)
```

**Arguments**

- `fips` the state abbreviation or fips code vector
get_qwi

Value

States Abbreviations or FIPs as FIP character strings

Examples

library(tidyqwi)

converted_fips(37)
converted_fips("37")
converted_fips("NC")
converted_fips("nc")

Description

The purpose of this function is to retrieve firm information from the US Census’ Quarterly Workforce Indicator API. These data can be retrieved with by specifying the states, the quarters, the years, and additional detail. This function can accept multiple states, years and quarters. This makes the data retrieval easier and stay inside of the US Census’ limits on the API.

Usage

get_qwi(years, variables = NULL, quarters = c(1, 2, 3, 4),
  industry_level = 2, states, endpoint = "sa", all_groups = TRUE,
  owner_code = TRUE, geography = "cbsa", seasonadj = "j",
  apikey = NULL, processing = "sequential")

Arguments

years: years to fetch (e.g. 2010, or c(2010, 2011))
variables: the variables you wish to fetch. Default is all.
quarters: The quarters to fetch (e.g. c(1,2,3,4)) Default is all
industry_level: Industries to fetch. Default is all level 2
states: state fips code to fetch
endpoint: US Census endpoint designation. One of "sa" for Sex * Age, "se" for Sex by Education and "rh" for Race/Ethnicity
all_groups: default to true
owner_code: firm owner code
geography: the US Census geography granularity (one of cbsa or county)
industry_labels

seasonadj  seasonal adjustment factor (one of "U" or "S")
apikey     your US Census API Key
processing the processing strategy (default = "sequential")

Value
the desired data from the US Census’s Quarterly Workforce API

Examples

```r
## Not run:
library(tidyqwi)

# One state, one year
nc_qwi <- get_qwi(years = "2010",
states = "11",
geography = "county",
apikey = census_key,
endpoint = "rh",
variables = c("sEmp", "Emp"), all_groups = FALSE,
industry_level = "2", processing = "sequential")

# Multiple states, multiple years
qwi_multi_year <- get_qwi(years = c("2010", "2011", "2012"),
states = c("NC", "SC"),
geography = "county",
apikey = census_key,
endpoint = "rh",
variables = c("sEmp", "Emp"), all_groups = FALSE,
industry_level = "2", processing = "sequential")

## End(Not run)
```

industry_labels  Industry Labels

Description
These data are the industry labels specified by the United States Census Bureau

Usage
industry_labels
Format

- a dataframe with 433 rows and 3 columns:
  - **industry**: Industry Numeric Code
  - **label**: Description of Industry Level
  - **ind_level**: Industry Level ...

Source

https://lehd.ces.census.gov/data/schema/latest/label_industry.csv

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Example Data Set

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Description

These data represent an example returned query for NC for 2010

Usage

nc_qwi

Format

- a dataframe with 3244 rows and 44 columns:

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Owner Codes

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Description

Owner Codes

Usage

owner_codes

Format

- a dataframe with 3 rows and 2 columns:
  - **ownercode**: ownercode
  - **label**: label ...

Source

https://lehd.ces.census.gov/data/schema/latest/label_ownercode.csv
**parse_qwi_message**

**Description**
An internally used function to parse the returned API call.

**Usage**
```
parse_qwi_message(x)
```

**Arguments**
- `x`: a returned call response from the US Census QWI API

**qwi_var_names**

**QWI Variable Names**

**Description**
These data represent the different variable types available from the QWI API.

**Usage**
```
qwi_var_names
```

**Format**
a dataframe with 83 rows and 9 columns:
- `name`: state name
- `label`: state fips code
- `concept`: state abbreviation
- `required`: requirements
- `attributes`: details of attributes
- `limit`: limit
- `predicate type`: predicate type
- `group`: group level
- `values`: values ...

**Source**
https://api.census.gov/data/timeseries/qwi/se/variables.html
show_condition

Description

show_condition

Usage

show_condition(code)

Arguments

code the code whose message you wish to interpret

state_info

State Data (FIPS, Abbreviations, etc)

Description

State Data (FIPS, Abbreviations, etc)

Usage

state_info

Format

a dataframe with 51 rows and 3 columns:

name state name
state_fips state fips code
state_abbreviation state abbreviation ...

Source

https://www.census.gov/geo/reference/ansi_statetables.html
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