Package 'readoecd'

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Title Download and Tidy Data from the 'OECD'

Version 0.3.5

Description Provides clean, tidy access to key economic indicators published by the 'Organisation for Economic Co-operation and Development' ('OECD'), covering GDP, CPI inflation, unemployment, tax revenue, government deficit, health expenditure, education expenditure, income inequality, labour productivity, and current account balance across all 38 'OECD' member countries. Data is downloaded from the 'OECD Data Explorer' API <https://data-explorer.oecd.org> on first use and cached locally for subsequent calls. Returns tidy long-format data frames ready for analysis and visualisation.

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BugReports https://github.com/charlescoverdale/readoecd/issues

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`check_oecd_api` *Check OECD API connectivity*

Description

Tests the OECD API by making a small live request. Useful for diagnosing connectivity issues or confirming the API is responding normally.

Usage

```
check_oecd_api()
```

Value

Invisibly returns `TRUE` if the API is reachable, otherwise throws an error.

See Also

Other utilities: `clear_oecd_cache()`, `list_oecd_countries()`

Examples

```
## Not run:
check_oecd_api()

## End(Not run)
```

clear_oecd_cache *Clear the readoecd local cache*

Description

Deletes all files cached by `readoecd` on your local machine. After clearing, the next call to any `get_oecd_*()` function will re-download from the OECD API.

Usage

```
clear_oecd_cache()
```

Details

Cached files are used for 7 days and then downloaded again; set `options(readoecd.cache_ttl = )` to a number of hours to change this.

Value

Invisibly returns the number of files deleted.

See Also

Other utilities: `check_oecd_api()`, `list_oecd_countries()`

Examples

```
op <- options(readoecd.cache_dir = tempdir())
clear_oecd_cache()
options(op)
```

get_oecd_cpi *Get OECD CPI inflation data*

Description

Downloads (and caches) annual consumer price inflation for OECD member countries from the OECD Prices database (COICOP 1999 classification).

Usage

```
get_oecd_cpi(countries = "all", start_year = 1990, refresh = FALSE)
```

Arguments

countries	Character vector of ISO 3166-1 alpha-3 country codes, or "all" for all available OECD members. Defaults to "all". Run list_oecd_countries() to see available codes.
start_year	Numeric. Earliest year to include. Defaults to 1990.
refresh	Logical. If TRUE, re-download even if a cached copy exists. Defaults to FALSE.

Details

Returns the year-on-year percentage change in the Consumer Price Index (CPI) for total expenditure, not seasonally adjusted. This is the standard harmonised measure of headline inflation used for cross-country comparisons.

Value

A data frame with columns:

country ISO 3166-1 alpha-3 country code (character)

country_name English country name (character)

year Calendar year (integer)

series "CPI_INFLATION" (character)

value Annual CPI inflation rate (numeric)

unit "% change, year-on-year" (character)

See Also

Other economic indicators: get_oecd_gdp(), get_oecd_unemployment()

Examples

```
op <- options(readoecd.cache_dir = tempdir())
cpi <- try(get_oecd_cpi(c("AUS", "GBR", "USA"), start_year = 2000))
if (!inherits(cpi, "try-error")) head(cpi)
options(op)
```

---

get_oecd_current_account

Get OECD trade (balance of payments) data

Description

Downloads (and caches) annual current account balance data for OECD member countries from the OECD Balance of Payments (BOP) database.

Usage

```
get_oecd_current_account(countries = "all", start_year = 1990, refresh = FALSE)
```

Arguments

countries	Character vector of ISO 3166-1 alpha-3 country codes, or "all" for all available OECD members. Defaults to "all". Run list_oecd_countries() to see available codes.
start_year	Numeric. Earliest year to include. Defaults to 1990.
refresh	Logical. If TRUE, re-download even if a cached copy exists. Defaults to FALSE.

Details

Returns the current account balance (credits minus debits) with the rest of the world, in millions of US dollars at current exchange rates. A positive value indicates a current account surplus; a negative value indicates a deficit.

Value

A data frame with columns:

country ISO 3166-1 alpha-3 country code (character)

country_name English country name (character)

year Calendar year (integer)

series "CURRENT_ACCOUNT" or "CURRENT_ACCOUNT_GOODS_SERVICES" (character)

value Current account balance in millions USD (numeric)

unit "Millions USD (exchange rate)" (character)

See Also

Other productivity and trade: get_oecd_productivity()

Examples

```
op <- options(readoecd.cache_dir = tempdir())
trade <- try(get_oecd_current_account(c("AUS", "DEU", "USA"), start_year = 2000))
if (!inherits(trade, "try-error")) head(trade)
options(op)
```

`get_oecd_deficit` *Get OECD government deficit data*

Description

Downloads (and caches) general government net lending/borrowing as a share of GDP for OECD member countries from the OECD National Accounts (NAAG) database.

Usage

```
get_oecd_deficit(countries = "all", start_year = 1990, refresh = FALSE)
```

Arguments

`countries`	Character vector of ISO 3166-1 alpha-3 country codes, or `"all"` for all available OECD members. Defaults to `"all"`. Run `list_oecd_countries()` to see available codes.
`start_year`	Numeric. Earliest year to include. Defaults to `1990`.
`refresh`	Logical. If `TRUE`, re-download even if a cached copy exists. Defaults to `FALSE`.

Details

Net lending/borrowing is the difference between government revenue and expenditure, expressed as a percentage of GDP. A positive value indicates a surplus (government saving); a negative value indicates a deficit (government borrowing). This is the standard fiscal balance measure used for cross-country comparisons and is consistent with the System of National Accounts (SNA) definition.

Value

A data frame with columns:

country ISO 3166-1 alpha-3 country code (character)

country_name English country name (character)

year Calendar year (integer)

series `"GOVT_NET_LENDING"` (character)

value Net lending/borrowing as a share of GDP (numeric). Positive = surplus; negative = deficit.

unit `"% of GDP"` (character)

See Also

Other fiscal: `get_oecd_tax()`

Examples

```
op <- options(readoecd.cache_dir = tempdir())
deficit <- try(get_oecd_deficit(c("AUS", "GBR", "USA"), start_year = 2000))
if (!inherits(deficit, "try-error")) head(deficit)
options(op)
```

`get_oecd_education` *Get OECD education expenditure data*

Description

Downloads (and caches) total education expenditure as a share of GDP for OECD member countries from the OECD Education at a Glance (EAG) UOE Finance database.

Usage

```
get_oecd_education(countries = "all", start_year = 1990, refresh = FALSE)
```

Arguments

`countries`	Character vector of ISO 3166-1 alpha-3 country codes, or `"all"` for all available OECD members. Defaults to `"all"`. Run `list_oecd_countries()` to see available codes.
`start_year`	Numeric. Earliest year to include. Defaults to `1990`.
`refresh`	Logical. If `TRUE`, re-download even if a cached copy exists. Defaults to `FALSE`.

Details

Education expenditure covers spending on educational institutions across all levels of education (ISCED 0–8), from all public and private sources, expressed as a percentage of GDP.

Value

A data frame with columns:

country ISO 3166-1 alpha-3 country code (character)

country_name English country name (character)

year Calendar year (integer)

series `"EDU_EXPENDITURE"` (character)

value Total education expenditure as a share of GDP (numeric)

unit `"% of GDP"` (character)

See Also

Other social indicators: `get_oecd_health()`, `get_oecd_inequality()`

Examples

```
op <- options(readoecd.cache_dir = tempdir())
edu <- try(get_oecd_education(c("AUS", "GBR", "USA"), start_year = 2000))
if (!inherits(edu, "try-error")) head(edu)
options(op)
```

`get_oecd_gdp` *Get OECD GDP data*

Description

Downloads (and caches) annual gross domestic product (GDP) at current prices for OECD member countries from the OECD National Accounts database.

Usage

```
get_oecd_gdp(countries = "all", start_year = 1990, refresh = FALSE)
```

Arguments

`countries`	Character vector of ISO 3166-1 alpha-3 country codes, or `"all"` for all 38 OECD members. Defaults to `"all"`. Run `list_oecd_countries()` to see available codes.
`start_year`	Numeric. Earliest year to include. Defaults to `1990`.
`refresh`	Logical. If `TRUE`, re-download even if a cached copy exists. Defaults to `FALSE`.

Details

GDP is measured using the expenditure approach (Table 1 of the OECD Main National Accounts), valued at current prices in US dollars converted using purchasing power parities (PPPs) where available.

Value

A data frame with columns:

country ISO 3166-1 alpha-3 country code (character)

country_name English country name (character)

year Calendar year (integer)

series `"GDP"` (character)

value GDP value at current prices (numeric)

unit Unit of measurement (character)

See Also

Other economic indicators: `get_oecd_cpi()`, `get_oecd_unemployment()`

Examples

```
op <- options(readoecd.cache_dir = tempdir())
gdp <- try(get_oecd_gdp(c("AUS", "GBR", "USA"), start_year = 2010))

if (!inherits(gdp, "try-error")) {
  # Largest OECD economies
  latest <- gdp[gdp$year == max(gdp$year), ]
  head(latest[order(-latest$value), c("country_name", "value")], 10)
}
options(op)
```

---

get_oecd_health *Get OECD health expenditure data*

Description

Downloads (and caches) total current health expenditure as a share of GDP for OECD member countries from the System of Health Accounts (SHA) database.

Usage

```
get_oecd_health(countries = "all", start_year = 1990, refresh = FALSE)
```

Arguments

`countries`	Character vector of ISO 3166-1 alpha-3 country codes, or `"all"` for all available OECD members. Defaults to `"all"`. Run `list_oecd_countries()` to see available codes.
`start_year`	Numeric. Earliest year to include. Defaults to `1990`.
`refresh`	Logical. If `TRUE`, re-download even if a cached copy exists. Defaults to `FALSE`.

Details

Health expenditure covers all spending on health care goods and services across all financing sources (government, compulsory insurance, voluntary insurance, and out-of-pocket payments), measured as a percentage of GDP at current prices.

Value

A data frame with columns:

country ISO 3166-1 alpha-3 country code (character)

country_name English country name (character)

year Calendar year (integer)

series `"HEALTH_EXPENDITURE"` (character)

value Total health expenditure as a share of GDP (numeric)

unit `"% of GDP"` (character)

See Also

Other social indicators: `get_oecd_education()`, `get_oecd_inequality()`

Examples

```
op <- options(readoecd.cache_dir = tempdir())
health <- try(get_oecd_health(c("AUS", "GBR", "USA"), start_year = 2000))
if (!inherits(health, "try-error")) head(health)
options(op)
```

---

get_oecd_inequality *Get OECD income inequality data*

Description

Downloads (and caches) the Gini coefficient of disposable income for OECD member countries from the OECD Income Distribution Database (IDD).

Usage

```
get_oecd_inequality(countries = "all", start_year = 1990, refresh = FALSE)
```

Arguments

`countries`	Character vector of ISO 3166-1 alpha-3 country codes, or `"all"` for all available OECD members. Defaults to `"all"`. Run `list_oecd_countries()` to see available codes.
`start_year`	Numeric. Earliest year to include. Defaults to `1990`.
`refresh`	Logical. If `TRUE`, re-download even if a cached copy exists. Defaults to `FALSE`.

Details

The Gini coefficient measures income inequality on a scale from 0 (perfect equality) to 1 (maximum inequality). Disposable income is household income after taxes and transfers. The series follows the OECD METH2012 methodology where available for consistency across countries and time.

Value

A data frame with columns:

country ISO 3166-1 alpha-3 country code (character)

country_name English country name (character)

year Calendar year (integer)

series `"GINI"` (character)

value Gini coefficient of disposable income (numeric)

unit `"Gini coefficient (0-1)"` (character)

See Also

Other social indicators: `get_oecd_education()`, `get_oecd_health()`

Examples

```
op <- options(readoecd.cache_dir = tempdir())
gini <- try(get_oecd_inequality(c("AUS", "GBR", "USA", "DNK"), start_year = 2000))
if (!inherits(gini, "try-error")) head(gini)
options(op)
```

`get_oecd_productivity` *Get OECD productivity data*

Description

Downloads (and caches) labour productivity data for OECD member countries from the OECD Productivity Database (PDB).

Usage

```
get_oecd_productivity(countries = "all", start_year = 1990, refresh = FALSE)
```

Arguments

`countries`	Character vector of ISO 3166-1 alpha-3 country codes, or `"all"` for all available OECD members. Defaults to `"all"`. Run `list_oecd_countries()` to see available codes.
`start_year`	Numeric. Earliest year to include. Defaults to `1990`.
`refresh`	Logical. If `TRUE`, re-download even if a cached copy exists. Defaults to `FALSE`.

Details

Returns GDP per hour worked where available (in USD purchasing power parities), falling back to GDP per capita. Values are at current prices.

Value

A data frame with columns:

country ISO 3166-1 alpha-3 country code (character)

country_name English country name (character)

year Calendar year (integer)

series `"GDP_PER_HOUR"` or `"GDP_PER_CAPITA"` (character)

value Productivity value (numeric)

unit Unit of measurement (character)

See Also

Other productivity and trade: `get_oecd_current_account()`

Examples

```
op <- options(readoecd.cache_dir = tempdir())
prod <- try(get_oecd_productivity(c("AUS", "GBR", "USA"), start_year = 2000))
if (!inherits(prod, "try-error")) head(prod)
options(op)
```

---

get_oecd_tax *Get OECD tax revenue data*

Description

Downloads (and caches) total tax revenue as a share of GDP for OECD member countries from the OECD Revenue Statistics Comparator database.

Usage

```
get_oecd_tax(countries = "all", start_year = 1990, refresh = FALSE)
```

Arguments

`countries`	Character vector of ISO 3166-1 alpha-3 country codes, or `"all"` for all available OECD members. Defaults to `"all"`. Run `list_oecd_countries()` to see available codes.
`start_year`	Numeric. Earliest year to include. Defaults to `1990`.
`refresh`	Logical. If `TRUE`, re-download even if a cached copy exists. Defaults to `FALSE`.

Value

A data frame with columns:

country ISO 3166-1 alpha-3 country code (character)

country_name English country name (character)

year Calendar year (integer)

series `"TAX_REVENUE"` (character)

value Total tax revenue as a share of GDP (numeric)

unit `"% of GDP"` (character)

See Also

Other fiscal: `get_oecd_deficit()`

Examples

```
op <- options(readoecd.cache_dir = tempdir())
tax <- try(get_oecd_tax(c("AUS", "GBR", "USA"), start_year = 2000))
if (!inherits(tax, "try-error")) head(tax)
options(op)
```

---

get_oecd_unemployment *Get OECD unemployment rates*

Description

Downloads (and caches) monthly harmonised unemployment rates for OECD member countries from the OECD Labour Force Statistics database.

Usage

```
get_oecd_unemployment(countries = "all", start_year = 2000, refresh = FALSE)
```

Arguments

`countries`	Character vector of ISO 3166-1 alpha-3 country codes, or `"all"` for all 38 OECD members. Defaults to `"all"`. Run `list_oecd_countries()` to see available codes.
`start_year`	Numeric. Earliest year to include. Defaults to `2000`.
`refresh`	Logical. If `TRUE`, re-download even if a cached copy exists. Defaults to `FALSE`.

Details

Returns the seasonally adjusted unemployment rate as a percentage of the labour force, for persons aged 15 and over (total, both sexes). This is the standard harmonised series used for cross-country comparisons.

Value

A data frame with columns:

country ISO 3166-1 alpha-3 country code (character)

country_name English country name (character)

period Calendar month in `"YYYY-MM"` format (character)

series `"Unemployment rate"` (character)

value Unemployment rate as a percentage of the labour force (numeric)

unit `"% of labour force"` (character)

See Also

Other economic indicators: `get_oecd_cpi()`, `get_oecd_gdp()`

Examples

```
op <- options(readoecd.cache_dir = tempdir())
# All OECD members since 2010
une <- try(get_oecd_unemployment(start_year = 2010))

# Australia and UK since 2020
une <- try(get_oecd_unemployment(c("AUS", "GBR"), start_year = 2020))

if (!inherits(une, "try-error")) {
  # Which country had the highest unemployment in 2020?
  une2020 <- une[startsWith(une$period, "2020"), ]
  une2020_avg <- aggregate(value ~ country_name, une2020, mean)
  head(une2020_avg[order(-une2020_avg$value), ], 5)
}
options(op)
```

---

list_oecd_countries *List OECD member countries*

Description

Returns a data frame of the 38 OECD member countries with their ISO 3166-1 alpha-3 codes and English names. No network call is required.

Usage

```
list_oecd_countries()
```

Value

A data frame with columns:

iso3 ISO 3166-1 alpha-3 country code (character)

name English country name (character)

See Also

Other utilities: `check_oecd_api()`, `clear_oecd_cache()`

Examples

```
list_oecd_countries()
```

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