

Package ‘pwt10’

July 23, 2025

Version 10.01-0

Date 2023-02-27

Title Penn World Table (Version 10.x)

Description The Penn World Table 10.x (<<https://www.rug.nl/ggdc/productivity/pwt/>>) provides information on relative levels of income, output, input, and productivity for 183 countries between 1950 and 2019.

LazyData yes

LazyDataCompression xz

Depends R (>= 3.6.0)

License GPL-2 | GPL-3

NeedsCompilation no

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Repository CRAN

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pwt10.0

*Penn World Table 10.0***Description**

Relative levels of income, output, input, and productivity for 183 countries between 1950 and 2019 (base year: 2017).

Usage

```
data("pwt10.0")
```

Format

A data frame with 12,810 observations of 52 variables.

country factor with country name.

isocode factor with ISO 3166-1 alpha-3 country code.

year year.

currency factor with national currency unit.

rgdpe Expenditure-side real GDP at chained PPPs (in million 2017 USD).

rgdpo Output-side real GDP at chained PPPs (in million 2017 USD).

pop Population (in millions).

emp Number of persons engaged (in millions).

avh Average annual hours worked by persons engaged.

hc Human capital index, based on years of schooling and returns to education; see Human capital in PWT9.

ccon Real consumption of households and government, at current PPPs (in million 2017 USD).

cda Real domestic absorption, (real consumption plus investment), at current PPPs (in million 2017 USD).

cgdpe Expenditure-side real GDP at current PPPs (in million 2017 USD).

cgdpo Output-side real GDP at current PPPs (in million 2017 USD).

cn Capital stock at current PPPs (in million 2017 USD).

ck Capital services levels at current PPPs (USA = 1).

ctfp TFP level at current PPPs (USA = 1).

cwtfp Welfare-relevant TFP levels at current PPPs (USA = 1).

rgdpna Real GDP at constant 2017 national prices (in million 2017 USD).

rconna Real consumption at constant 2017 national prices (in million 2017 USD).

rdana Real domestic absorption at constant 2017 national prices (in million 2017 USD).

rnna Capital stock at constant 2017 national prices (in million 2017 USD).

rkna Capital services at constant 2017 national prices (2017 = 1).

rtfpna TFP at constant national prices (2017 = 1).

rwtfpna Welfare-relevant TFP at constant national prices (2017 = 1).

labsh Share of labour compensation in GDP at current national prices.

irr Real internal rate of return.

delta Average depreciation rate of the capital stock.

xr Exchange rate, national currency/USD (market and estimated).

pl_con Price level of CCON (PPP/XR, price level of USA GDPo in 2017 = 1).

pl_da Price level of CDA (PPP/XR, price level of USA GDPo in 2017 = 1).

pl_gdpo Price level of CGDPo (PPP/XR, price level of USA GDPo in 2017 = 1).

i_cig Factor indicating whether relative price data for consumption, investment, and government is extrapolated, benchmark, interpolated, ICP PPP timeseries: benchmark or interpolated, or ICP PPP timeseries: extrapolated.

i_xm Factor indicating whether relative price data for exports and imports is extrapolated, benchmark, or interpolated.

i_xr Factor indicating whether the exchange rate is market-based or estimated.

i_outlier Factor indicating whether the observation on pl_gdpe or pl_gdpo is an outlier or not.

i_irr Factor indicating whether the observation for irr is regular (not an outlier), may be biased due to a low capital share, hit the lower bound of 1 percent, or is an outlier.

cor_exp Correlation between expenditure shares of the country and the US (benchmark observations only).

statcap Statistical capacity indicator (source: World Bank, developing countries only).

csch_c Share of household consumption at current PPPs.

csch_i Share of gross capital formation at current PPPs.

csch_g Share of government consumption at current PPPs.

csch_x Share of merchandise exports at current PPPs.

csch_m Share of merchandise imports at current PPPs.

csch_r Share of residual trade and GDP statistical discrepancy at current PPPs.

pl_c Price level of household consumption (price level of USA GDPo in 2017 = 1).

pl_i Price level of capital formation (price level of USA GDPo in 2017 = 1).

pl_g Price level of government consumption (price level of USA GDPo in 2017 = 1).

pl_x Price level of exports (price level of USA GDPo in 2017 = 1).

pl_m Price level of imports (price level of USA GDPo in 2017 = 1).

pl_n Price level of the capital stock (price level of USA in 2017 = 1).

pl_k Price level of the capital services (price level of USA = 1).

Details

The Penn World Table (version 10.0) is a database with information on relative levels of income, output, input, and productivity, covering 183 countries between 1950 and 2019. It is provided at <https://www.rug.nl/ggdc/productivity/pwt/> under the Creative Commons Attribution License (CC-BY), see Feenstra, Inklaar, and Timmer (2021, 2015) for more details. Version 10.0 represents the fifth release since the switch to the *Next Generation of the Penn World Table* of PWT versions 8.0 and 8.1 (see Feenstra, Inklaar, and Timmer 2015), followed by version 9.0 and 9.1. Section I of Feenstra et al. (2015) is still the recommended starting point as the main structure of the database and definition of its variables are unchanged in PWT 10.0. Nevertheless Version 10.0 contains important new and revised data.

Source

Penn World Table 10.0, doi:[10.15141/S5Q94M](https://doi.org/10.15141/S5Q94M).

References

Feenstra RC, Inklaar R, Timmer MP (2021). PWT 10.0: A User's Guide. URL <https://www.rug.nl/ggdc/productivity/pwt/>.

Feenstra RC, Inklaar R, Timmer MP (2015). The Next Generation of the Penn World Table, *American Economic Review*, **105**(10), 3150–3182.

pwt10.01

Penn World Table 10.01

Description

Relative levels of income, output, input, and productivity for 183 countries between 1950 and 2019 (base year: 2017).

Usage

```
data("pwt10.01")
```

Format

A data frame with 12,810 observations of 52 variables.

country factor with country name.

isocode factor with ISO 3166-1 alpha-3 country code.

year year.

currency factor with national currency unit.

rgdpe Expenditure-side real GDP at chained PPPs (in million 2017 USD).

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cgdpe Expenditure-side real GDP at current PPPs (in million 2017 USD).

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pl_da Price level of CDA (PPP/XR), price level of USA GDPo in 2017 = 1.

pl_gdpo Price level of CGDPo (PPP/XR), price level of USA GDPo in 2017 = 1.

i_cig Factor indicating whether relative price data for consumption, investment, and government is extrapolated, benchmark, interpolated, ICP PPP timeseries: benchmark or interpolated, or ICP PPP timeseries: extrapolated.

i_xm Factor indicating whether relative price data for exports and imports is extrapolated, benchmark, or interpolated.

i_xr Factor indicating whether the exchange rate is market-based or estimated.

i_outlier Factor indicating whether the observation on pl_gdpe or pl_gdpo is an outlier or not.

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cs_h_c Share of household consumption at current PPPs.
cs_h_i Share of gross capital formation at current PPPs.
cs_h_g Share of government consumption at current PPPs.
cs_h_x Share of merchandise exports at current PPPs.
cs_h_m Share of merchandise imports at current PPPs.
cs_h_r Share of residual trade and GDP statistical discrepancy at current PPPs.
pl_c Price level of household consumption (price level of USA GDPo in 2017 = 1).
pl_i Price level of capital formation (price level of USA GDPo in 2017 = 1).
pl_g Price level of government consumption (price level of USA GDPo in 2017 = 1).
pl_x Price level of exports (price level of USA GDPo in 2017 = 1).
pl_m Price level of imports (price level of USA GDPo in 2017 = 1).
pl_n Price level of the capital stock (price level of USA in 2017 = 1).
pl_k Price level of the capital services (price level of USA = 1).

Details

The Penn World Table (version 10.01) is a database with information on relative levels of income, output, input, and productivity, covering 183 countries between 1950 and 2019. It is provided at <https://www.rug.nl/ggdc/productivity/pwt/> under the Creative Commons Attribution License (CC-BY), see Feenstra, Inklaar, and Timmer (2021, 2015) for more details. Version 10.01 is a minor revision of the previous version 10.0, which represents the fifth major release since the switch to the *Next Generation of the Penn World Table* of PWT versions 8.0 and 8.1 (see Feenstra, Inklaar, and Timmer 2015), followed by version 9.0 and 9.1. Section I of Feenstra et al. (2015) is still the recommended starting point as the main structure of the database and definition of its variables are unchanged in PWT 10.01.

The changes in version 10.01 relate to the calculation of investment deflators and primarily affect the *na variables for capital and TFP, i.e., those primarily designed to capture growth over time.

Source

Groningen Growth and Development Centre (2023). Penn World Table 10.01, DataverseNL. doi:10.34894/QT5BCC.

References

- Feenstra RC, Inklaar R, Timmer MP (2021). PWT 10.0: A User's Guide. URL <https://www.rug.nl/ggdc/productivity/pwt/>.
- Feenstra RC, Inklaar R, Timmer MP (2015). The Next Generation of the Penn World Table, *American Economic Review*, **105**(10), 3150–3182.

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