

International Comparison Program (ICP) Technical Advisory Group (TAG) Meeting

International Sources of Purchasing Power Parities

Objective

The technical note introduces the most common international sources of PPPs and explains the main differences between them

- Focus on global PPPs provided by each data source
- Regional PPPs disseminated by the ICP Regional Implementing Agencies, Eurostat and OECD are not discussed

Global PPPs are available from various international sources, including:

- International Comparison Program (ICP)
- Penn World Table (PWT)
- World Bank (WB) World Development Indicators (WDI)
- International Monetary Fund (IMF) World Economic Outlook (WEO)
- Central Intelligence Agency (CIA)

International Comparison Program (ICP)

The ICP is the only PPP source that collects and compiles national input data and has a status as an official statistical program under the UNSC

- Historically, ICP results were published every six years
- Starting from the ICP 2017 cycle:
 - ICP results every three years, as per the UNSC recommendation
 - “Annual” PPPs interpolated between the two most recent benchmarks
 - Revised results for the previous benchmark
- Results are published for 44 expenditure headings
- Access to underlying data is granted for eligible researchers and uses
- Methodological consistency between benchmark years is a priority of the ICP

ICP input data is a common source for all PPP sources; however, PPP differences exist due to different objectives, methodology, publication timeline and frequency, etc.

Penn World Table (PWT) [1]

PWT was originally developed at the University of Pennsylvania by Robert Summers, Irving Kravis, and Alan Heston

- Original purpose to extend ICP PPP coverage to additional countries and years
- Up to **PWT version 7.1 (2012)**, developed at the University of Pennsylvania under the auspices of Alan Heston, with Bettina Aten
- From **PWT version 8.0 (2013)** onwards, managed by the University of Groningen and the University of California, Davis, by Robert Feenstra, Robert Inklaar, and Marcel Timmer

Today, PWT is one of the largest databases on relative levels of income, output, input, and productivity (i.e., beyond a source of PPPs only)

Penn World Table (PWT) [2]

The PWT is widely used in academic research and teaching and is maintained as an independent academic research project

- PWT undertakes experimental research, which may lead to new methodologies being considered and adopted by the ICP
- PWT does not operate under an official governance framework, following an established statistical methodology, like ICP
- PWT and ICP approaches are complementary
 - PWT depends on the ICP institutional framework to collect reliable data
 - ICP benefits from the PWT experimentation to improve its own methodology
- PWT publishes PPP-based data for GDP and its main aggregates

Penn World Table (PWT) [3]

A- Main methodological differences between the ICP and PWT PPPs

1. PPP aggregation methods:
 - ICP uses GEKS | PWT uses GEKS and GK
2. Treatment of regional data
 - ICP imposes fixity | PWT does not impose fixity
3. Treatment of trade balance
 - ICP uses MERs for imports and exports | PWT calculates specific PPPs
 - PWT also extrapolates PPPs beyond the most recent ICP benchmark year using relative inflation rates and available Eurostat-OECD PPPs

Penn World Table (PWT) [4]

B- Data source differences between the ICP and PWT

1. National Accounts expenditure data
 - ICP uses data provided by countries | PWT uses UN data
 - PWT uses ICP expenditure structures at basic heading level
2. Concepts of individual and collective consumption
 - ICP follows household consumption, actual individual consumption and collective consumption definitions | PWT follows household consumption and “total” consumption definitions

C- Treatment of historical data

1. ICP/World Bank hosts data in electronic form from 2005 to 2017 | PWT database starts from 1950

World Bank World Development Indicators (WDI)

The World Development Indicators (WDI) is the World Bank's flagship database of development data

- Features PPPs and numerous PPP-based indicators (39) from 1990
- Publishes PPPs for GDP and household, or private, consumption and related datasets and indicators
 - GDP PPPs updated twice a year | HHC PPPs update a few times per year
 - Eurostat-OECD PPPs regularly updated

WDI extrapolates ICP PPPs for non-ICP benchmark years and for years not covered by the annual PPPs provided by the ICP

- For years before 2011 and after 2017, PPPs provided by the ICP are extrapolated to create a time series from 1990 to the latest year available

IMF World Economic Outlook (WEO) [1]

The World Economic Outlook (WEO) is IMF's flagship report

- Presents IMF's analyses of global economic developments in the near and medium term, including projections
- Released twice a year, at the IMF's Spring and Fall meetings
- Includes a database containing a wide set of different macroeconomic indicators covering several years, including:
 - PPP-adjusted GDP per capita (current)
 - PPP-adjusted GDP per capita (constant)
 - PPP adjusted GDP (current)

IMF World Economic Outlook (WEO) [2]

Current version of the WEO incorporates ICP 2017 cycle PPPs:

- Revised 2011 PPPs
- 2017 PPPs
- Annual PPPs for 2012-2016

The WEO extrapolates ICP PPPs backwards from 2011 and forwards from 2017

- Growth in relative GDP deflators between each economy and the US
 - Same approach as in the WDI
- GDP deflators used are IMF's own data and estimates
 - Extrapolated PPPs can be slightly different from those in the WDI

The Central Intelligence Agency (CIA) World Factbook

CIA produces and updates its CIA World Factbook for use by United States (US) government officials and other users

- Data collected from a wide variety of US government agencies and hundreds of published sources
- Initially updated on an annual basis, since late 2010 on weekly basis

The economy section presents PPP-based GDP figures for economies around the world

- Does not exclusively use ICP PPPs, as historical sources and estimates are reported to be used
- Further details on the sources for the economic data is not publicly provided

Next Steps

Incorporating feedback from the TAG

Posting the final note on the ICP website



THANK YOU