



International Comparison Program

2021 Cycle Overview

The [International Comparison Program](#) (ICP) is a worldwide statistical initiative that delivers a [vital public good](#): purchasing power parities (PPPs) and price level indexes (PLIs) for economies across the globe. PPPs enable a wealth of cross-country comparable metrics on economic output, material well-being, and consumption, as well as a host of PPP-based indicators across the socioeconomic spectrum, many of which are used for monitoring progress towards the Sustainable Development Goals.

[History](#)

The ICP is now in its 56th year, having grown from a modest research project in 1968 spearheaded by the United Nations Statistical Division and the International Comparisons Unit of the University of Pennsylvania and supported by financial contributions from the Ford Foundation and the World Bank. ICP comparisons have been completed for 1970, 1973, 1975, 1980, 1985, 1993, 2005, 2011, 2017, and 2021. The scheduled ICP 2020 cycle was postponed to the benchmark year 2021 to accommodate COVID-19 pandemic-related challenges to statistical exercises and implementing agencies from March 2020 onwards. Country participation consisted of 10, 16, 34, 60, 64, 115, 146, 199, 177, and 176 economies respectively.

[Partnership](#)

The successful implementation of the ICP is reliant on the strength of its [global partnership](#). The Program is coordinated by the World Bank under the auspices of the United Nations Statistical Commission. The ICP 2021's partners included the 176 participating economies, the African Development Bank, the Asian Development Bank, the Interstate Statistical Committee of the Commonwealth of Independent States, the Organisation for Economic Co-operation and Development, the Statistical Office of the European Union, the United Nations Economic Commission for Latin America and the Caribbean, the United Nations Economic and Social Commission for Western Asia, and the International Monetary Fund. Together, these

stakeholders work to a common set of standards and methodology under a robust governance framework.

Governance

The governance structure of the ICP consists of the following bodies, each with its distinct role and responsibility:

- The *United Nations Statistical Commission* decides the frequency and operational modality of the Program.
- The *ICP Governing Board* sets the strategies and policies governing the production of ICP results. For the ICP 2021 cycle, it was chaired by Statistics Finland and Statistics South Africa.
- The *ICP Technical Advisory Group* develops the Program's methodology and assesses the overall quality of ICP results. For the ICP 2021 cycle, it was initially led by Nobel laureate Sir Angus Deaton and later by Paul Schreyer, Chief Statistician and Director, OECD.
- The *ICP Inter-Agency Coordination Group* coordinates activities across regions and develops common ICP standards, guidelines, and protocols for all participating economies in the Program.
- The *ICP Global Office* at the World Bank undertakes the overall coordination and implementation of the ICP and calculates and disseminates global ICP results.
- The *Regional Implementing Agencies* coordinate and implement the regional ICP comparisons and calculate and disseminate regional ICP results.
- The *National Implementing Agencies* undertake the price surveys and compile the national accounts expenditure and other data required for producing PPPs.

Uses and Applications

ICP PPPs are used to monitor progress toward many of the [United Nations' Sustainable Development Goals](#), covering poverty, agriculture, health, education, energy and emissions, labor, research and development, and cultural and natural heritage. PPPs are also key to the World Bank's twin goals of ending extreme poverty and promoting shared prosperity. PPPs are also used in other development indicators, such as the United Nations' Human Development Index and the World Economic Forum's Global Competitiveness Index. The European Union uses PPPs in its allocation of the European structural and investment funds across European Union members. The International Bank for Reconstruction and Development and the International Monetary Fund both rely on the PPP-based GDPs of member economies to determine their shareholding and drawing rights. ICP data are used in diet cost and affordability metrics reported in the UN's State of Food Security and Nutrition in the World report. The World Bank publication [Purchasing power parities for policy making: a visual guide to using data from the International Comparison Program](#) provides an overview of these applications and others and sets out the [recommended use of PPP-based data](#).

ICP Outputs

The International Comparison Program (ICP) publishes the following indicators:

- *Purchasing power parities (PPPs)*: PPPs are both currency conversion factors and spatial price indexes. They convert different currencies to a common currency and, in the process of conversion, equalize their purchasing power by eliminating the differences in price levels between economies. They show, with reference to a base economy, the relative price of a given basket of goods and services in each of the economies being compared. In contrast, consumer price indexes (CPIs) are temporal price indexes that show, with reference to a base period, the price of a given basket of goods and services at different points in time for a given economy.
- *Price level indices (PLIs)*: These are standardized indexes obtained by dividing an economy's PPP by its market exchange rate with a base economy. They express the price level of a given economy relative to another.
- *PPP-based Gross Domestic Product (GDP) and its expenditure components*: These are expenditures that are valued at a common price level. They are obtained by dividing, for each economy, its nominal GDP and expenditure components by their respective PPPs. PPP-based comparisons of economic output differ from market exchange rate-based comparisons as the latter do not distinguish between the relative price levels of different items in economies. PPP-based comparisons are also less impacted by the potential volatility of market exchange rates.
- *PPP-based per capita GDP and its expenditure components*: These are obtained by dividing, for each economy, its PPP-based GDP and expenditure components by its population.

ICP Data Requirements

The ICP requires participating economies to collect and compile the following data in order to calculate ICP PPPs and associated indicators:

- *Price data*: national annual average prices in local currency units for a common basket of goods and services. The priced goods and services should reflect the definition of the respective common structured product definition. Goods and services priced need to be both comparable across economies and representative of the consumption patterns in these economies.
- *Expenditure data*: detailed expenditures in local currency units compiled from national accounts as per the common [classification of final expenditure on GDP](#).
- *Population estimates and market exchange rates*.

ICP Data Quality Assurance Processes

Quality assurance processes are undertaken at three levels:

- *National/intra-country*: data collected and compiled for an economy are validated by the respective ICP national implementing agency.
- *Regional/intercountry*: data for all economies within a given region are validated by the respective ICP regional and national implementing agencies.
- *Global/inter-regional*: data for all economies across all regions are validated by the ICP Global Office at the World Bank and regional implementing agencies.

ICP Computation Processes

ICP PPPs for each participating economy are calculated in two stages:

- *Regional PPPs*: Each regional implementing agency calculates a set of regional PPPs for the participating economies in its region. The regional PPPs include both global items, common to all ICP regions, and regional items, exclusive to each ICP region. The process is outlined [here](#).
- *Global PPPs*: The ICP Global Office at the World Bank links these regional PPPs into a common set of global PPPs using methodology developed by the ICP Technical Advisory Group. This involves calculating linking factors between each regional base economy and the global base economy, the United States. These linking factors are calculated based on the prices of global items collected in all ICP regions. The process is outlined [here](#).

PLIs, PPP-based GDP and expenditure components, and PPP-based per capita GDP and expenditure components for each participating economy are then derived based on the calculated global PPPs.

The global PPPs estimated from this computation process observe three properties: (i) base-country invariance (that is, the PPP between any two economies are the same regardless of the choice of base economy); (ii) maintain regional fixity (that is, the ratio of real expenditures between any pair of economies in a region remains the same after the regional results have been combined into a set of global results); (iii) transitivity (that is, the PPP between any two economies is the same whether it is computed directly or indirectly through a third economy).

Lastly, it is important to note that ICP economies are treated equally regardless of the size of their GDP as the underlying computation methods are non-additive (that is, the sum of the real expenditures of the basic headings constituting an aggregate does not equal the real expenditures based on the PPPs for the aggregate). In contrast, additive methods have the disadvantage of giving more weight to the relative prices of the larger, more developed economies. As a result, the real expenditures of poor economies become artificially larger and move closer to the real expenditures of rich economies. This is known as the Gerschenkron effect. For the common uses of ICP PPPs, such as for poverty analysis, non-additive methods that avoid the Gerschenkron effect are preferred.

ICP 2021 Methodological developments

While the core methodology of the ICP 2021 cycle remained the same as the ICP 2017 cycle, three main developments were adopted in the estimation of the 2021 benchmark PPPs. These developments were aimed to further harmonize the computation process across all participating regions and economies by overcoming exceptions to the core methodology:

- The Commonwealth of Independent States (CIS) region is now treated as the sixth core region in the global linking procedure. In previous ICP cycles, the CIS region was linked via the Russian Federation's dual participation in both the CIS and Eurostat-OECD ICP regions. In the ICP 2021 cycle, the CIS region was linked through the same global core list approach as all other ICP regions. For ICP 2017, the Russian Federation's results were based on the OECD comparison, and for ICP 2021, they were based on the CIS comparison.
- Regional housing PPPs for economies in the Asia and the Pacific region were estimated using a hybrid approach, that is, the standard ICP method for estimating housing PPPs based on rental and volume data. This approach was used for the revised ICP 2017 results and ICP 2021 results, both at the regional and global levels, and replaced the previously utilized reference volume approach.
- For economies that did not participate in the ICP 2021 cycle and, therefore, did not submit any data, PPPs are imputed based on a regression model using other official data sources. PPPs for Actual Individual Consumption were imputed for the first time in the ICP 2021 cycle, in addition to PPPs for GDP and household consumption imputed during the earlier ICP cycles.

For more information, visit the [International Comparison Program](#) website.