



**REPORT OF THE FOURTH MEETING OF
THE INTERNATIONAL COMPARISON PROGRAM
TECHNICAL ADVISORY GROUP**

5th Meeting of the ICP Governing Board

December 13, 2019
World Bank, 1818 H St. NW, Washington, DC

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OCTOBER 28-29, 2019

WORLD BANK, WASHINGTON DC

WELCOME AND OPENING REMARKS

The fourth meeting of the International Comparison Program (ICP) Technical Advisory Group (TAG) took place on October 28-29, 2019 at the World Bank Headquarters in Washington, DC.

The main objectives of the meeting were to review and discuss i) the progress with the ongoing ICP 2017 cycle; ii) the full methodology for the ICP 2017 cycle; iii) the preliminary results from the ICP 2017 cycle; and iv) various outputs prepared by the technical Task Forces.

The meeting agenda is attached in Annex 1. In attendance were TAG members, Task Force members and staff from the World Bank Global ICP Office, which serves as TAG secretariat, as listed in Annex 2. Public meeting documents and presentations are available on the [TAG page](#) under the ICP website.

Sir Angus Deaton, Chair, opened the meeting by welcoming the attendees. Haishan Fu, World Bank, provided opening remarks, where she emphasized the recent positive progress made towards completing the ICP 2017 cycle. She stressed that the timetable to produce and release the results in April 2020 remained tight. To this end, she listed three key elements for meeting this release deadline, namely (i) increased efforts to conduct final data quality checks; (ii) timeliness and strict adherence to agreed submission deadlines; and (iii) robust and thorough processes to ensure the accuracy and reliability of our regional and global results.

SESSION 1: PROGRESS WITH IMPLEMENTING THE ICP 2017 CYCLE, RESEARCH AGENDA, AND OVERALL TIMETABLE

Nada Hamadeh, World Bank, briefed the TAG on the (i) progress with the ongoing ICP 2017 cycle; (ii) roadmap to the release of the ICP 2017 cycle results and communication and dissemination activities; (iii) preparations underway for the ICP 2020 cycle; (iv) progress with the ICP Research Agenda and new Task Forces; and (v) notable recent uses and applications of purchasing power parity (PPP) and outreach activities.

Recent positive developments include substantial improvements in the ICP 2017 cycle data quality, notable progress with producing a complete set of global results for the cycle, launch of the ICP 2020 cycle, and increased use of ICP data and results. Challenges remain with the tight timetable until the release of ICP 2017 results in April 2020, as well as with securing sustainable funding for the permanent program. With regards the ICP Research Agenda, new World Bank Task Forces were proposed under the remits "[PPPs and Global Poverty Measurement](#)" and "PPPs and the [Wealth of Nations](#)".

The TAG took note of the progress made and urged the global and regional implementing agencies to take all necessary remaining efforts to ensure the quality, completeness and timeliness of the ICP 2017 results.

The TAG noted the launch of the two proposed Task Forces. In addition, it indicated that the [output-based approaches for estimating PPPs for health and education](#) and [treatment of imports and exports in PPP comparisons](#) under the [ICP Research Agenda](#) should be addressed in future research.

SESSION 2: METHODOLOGY OVERVIEW

The TAG reviewed and discussed the overall approach for producing the ICP 2017 results. Against the background of the United Nations Statistical Committee's (UNSC) [recommendation](#) that no methodological changes be introduced for the ICP 2017 cycle—in order to maintain comparability over time and allow for producing reliable PPP timeseries—a particular focus was on reviewing the consistency of ICP 2017 methodology against ICP 2011 methodology, and to limit any possible methodological change. The TAG noted that it is not fully possible to exclude all methodological changes, if only because of revisions to the systems of national accounts, changes in country participation, and the movement of countries from one region to another. The discussion of how to handle methodological changes going forward should be a high priority for the TAG once the ICP 2017 cycle is complete.

Standard methodology for linking regional results into a global set of results

Marko Rissanen, World Bank, recalled the methodology for linking regional results into a global set of results.

The ICP 2011 approach for linking regional results into a global set of results involved estimation of inter-regional linking factors based on the country product dummy (CPD) method; linking the regional PPPs at the basic heading level utilizing the inter-regional linking factors; aggregating the linked basic heading PPPs based on the Gini-Éltető-Köves-Szulc (GEKS) method; and lastly, ensuring fixity of the global and regional results using the country aggregation with the volume redistribution (CAR-volume) procedure. The ICP 2017 cycle is using the ICP 2011 approach without modifications. However, exceptions to the standard methodology exist both for ICP 2011 and 2017, including regional and country special cases, and certain non-standard comparison headings, such as housing, health and education

The TAG agreed that, for the standard cases, the ICP 2011 linking methodology will be followed for the ICP 2017 cycle.

Special case: Linking the Commonwealth of Independent States (CIS) region to Eurostat-OECD comparison

Andrey Kosarev, Interstate Statistical Committee of the Commonwealth of Independent States (CIS-STAT), briefed the TAG on the approach for linking the CIS region into the Eurostat-OECD comparison.

For the ICP 2011 comparison, the CIS countries were linked through the Russian Federation, which participates in both the OECD and CIS comparisons, following a simple linear procedure. For the 2014 interim CIS comparison, CIS-STAT introduced a partially-multilateral procedure, in which CIS countries are linked to the Eurostat-OECD comparison following a simple linear procedure at the basic heading level; however, at the aggregated level CIS countries are linked through a multilateral procedure. The partially-

multilateral procedure is an improved approach, as the linking is based on a larger set of countries, and hence the results are more robust for the CIS countries. This partially-multilateral procedure was suggested for the ICP 2017 comparison.

The TAG agreed that this improved linking approach will be applied in the calculation of revised 2011 results, 2014 interim results and 2017 results, and that the impact will be limited to the results of CIS countries only.

Special case: Linking the Caribbean and countries with partial participation

Giovanni Savio, United Nations Economic Commission for Latin America and the Caribbean (UN-ECLAC), briefed the TAG on how the two sub-regions within Latin America and the Caribbean (LAC)— Latin America (LAT) and the Caribbean (CAR)—were linked in ICP 2011. He also recapped the steps followed for the estimation ICP 2011 PPPs for LAC and explained how gaps in country data submissions were handled in order to allow the estimation of regional basic headings PPPs.

The method employed by UN-ECLAC in ICP 2017 to link LAT and CAR remains unchanged from the method used in ICP 2011. The same three steps were followed in both ICP 2011 and ICP 2017. First, PPPs are produced for the full set of LAC countries. Second, separate sub-regional PPP aggregations are carried out, one for the LAT countries and another for the CAR countries. As a third and last step, the PPPs in the first step are re-indexed in accordance with the results from the second step, in order to maintain fixity of both LAT and CAR PPPs.

The approach used by UN-ECLAC to fill data gaps, and to center all price information to the reference year 2017, also follows the same method used in ICP 2011. In short, country's consumer price indices (CPIs) and national accounts deflators were used to shift prices from adjacent years to the reference year and to extrapolate ICP special survey¹ data from a previous ICP comparison to the current one. In addition, a country's external trade information was used to fill gaps for machinery and equipment, and proportional prices in other related and available basic headings were used to fill missing values. It was noted that gap-filling methods were only employed as a last resort and that the non-response rate increased for LAT and CAR relative to ICP 2011, particularly for ICP special surveys. Reasons for this increase include the 2017 hurricane in the Caribbean, limited statistical capacity, and competing priorities.

The TAG agreed that it is best to continue the ICP 2011 practice of linking the CAR countries to LAT using a method that ensures fixity of both LAT and CAR PPPs. The TAG also took note of how gaps in country data submissions in LAC were treated by UN-ECLAC.

Special case: Linking Georgia and Ukraine

David Roberts and Sergey Sergeev, independent consultants, briefed the TAG on the approach for linking Georgia and Ukraine into the global comparison.

In ICP 2005, Georgia and Ukraine participated in the CIS comparison. In ICP 2011, Ukraine participated in the CIS comparison; however, Georgia was linked through a bilateral comparison with Armenia. For the ICP 2017 cycle, Eurostat included the two countries as “guest participants” in the Eurostat-OECD

¹ ICP special surveys cover (i) housing rental and volume; (ii) private education; (iii) government compensation; (iv) machinery and equipment; and (v) construction and civil engineering.

comparison for the reference year 2017. Both countries followed the Eurostat-OECD methodology and provided required datasets accordingly.

The TAG approved the “guest participant” approach for linking Georgia and Ukraine within the ICP 2017 cycle and suggested that the ICP 2020 linking approach should ideally follow the ICP 2017 linking approach.

Special case: Linking Iran and dual-participation countries

Marko Rissanen briefed the TAG on linking Iran and dual-participation countries.

The Islamic Republic of Iran has been linked through different approaches during previous ICP rounds: in ICP 2005, linking was done through the Asia and the Pacific region. In ICP 2011, through a bilateral comparison with Turkey, which participates in the Eurostat-OECD comparison. For the ICP 2017 cycle, it is suggested that Iran would be linked through the Western Asia region. The regional results for Western Asia will not be impacted by this linking.

Egypt, Sudan and Morocco participate in both the Africa and Western Asia comparisons. Published global PPPs for these countries are geometric means of their respective global PPPs in the Africa and Western Asia comparisons. No changes to the global linking approach were proposed; however, it was noted that dual-participation creates various complications in the global linking.

The Russian Federation also participates in two regions, namely in the CIS and Eurostat-OECD comparisons; however, for Russia, only the Eurostat-OECD results are published, and the approach does not cause any complications in the global linking.

The TAG agreed to linking Iran through the Western Asia comparison. For linking dual-participation countries, the TAG noted that no changes are being proposed; however, it recommended that regional implementing agencies should seek a solution whereby each country participates in one region only to minimize the complications arising from dual participation.

Moving regions: Colombia’s and Costa Rica’s results within OECD

Francette Koechlin, Organisation for Economic Co-operation and Development (OECD), briefed the TAG on the impact of Colombia and Costa Rica moving from the LAC region to the Eurostat-OECD comparison.

In ICP 2011, Colombia and Costa Rica participated in the LAC region. For the ICP 2017 cycle, upon joining the OECD, these countries are participating in the Eurostat-OECD comparison. It was noted that, despite different methodologies, country groupings and challenges with extrapolation, the extrapolated ICP 2011 results and preliminary ICP 2017 results for these two countries are remarkably consistent.

The TAG took note of these findings on assessing the impact of countries moving from one region to another.

Non-standard headings: Linking health and education

Francette Koechlin, OECD, and Paulus Konijn, Statistical Office of the European Union (Eurostat), briefed the TAG on the suggested approach for linking health and education.

Eurostat and OECD use an output approach for estimating PPPs for health and education, while the ICP follows an input approach. Hence, a special approach is required at the global level to link Eurostat-OECD results to the ICP global results.

In ICP 2011, in the absence of salary data, education headings were linked through the output approach based on a selection of Latin American countries. Health headings, on the other hand, were linked through the input approach, as the required datasets were available. For the ICP 2017 cycle, Eurostat-OECD made special efforts to collect and estimate the required datasets to enable linking of both health and education headings through the input approach. The application of the CAR-volume procedure maintains fixity of the Eurostat-OECD's output approach-based results; however, it was stressed that the input datasets provided for linking purposes should not be disseminated, given their estimated nature.

The TAG approved the suggested linking approach for the ICP 2017 cycle, which is driven by data availability. Going forward, per the respective [ICP Research Agenda item](#), the ICP should investigate the feasibility of adopting the output approach for estimating PPPs for health and education.

Non-standard headings: Linking construction and civil engineering

Marko Rissanen briefed the TAG on the proposed approach for linking construction and civil engineering.

The ICP regions follow an input cost approach for estimating construction and civil engineering PPPs, while the Eurostat-OECD comparison uses a "Bills of Quantity"² approach. For linking purposes, Eurostat-OECD provides datasets per the ICP approach for a selection of countries. The ICP 2011 linking approach, which uses geometric means of regional PPPs, was suggested for the ICP 2017 cycle; however, it was noted that the selection of Eurostat-OECD countries for linking differs to some extent. It was also suggested that collected equipment hire data would be used, unlike in ICP 2011 where it was not used, due to concerns with survey data quality and comparability.

The TAG agreed that the same linking approach will be followed in ICP 2017 as in ICP 2011.

Calculation of productivity adjustment factors

Robert Inklaar, University of Groningen, briefed the TAG on the calculation of the productivity adjustment factors (PAFs), which are used in calculating regional results and global linking for government.

The ICP approach for estimating PPPs for government services is based on an input approach, in which selected government occupations are priced across countries. Given the differences in productivity, adjustment factors are applied to account for differences in capital per worker. Absent such data for government, adjustment factors are based on differences in economy-wide levels of capital per worker and their estimated contribution to output using the aggregate share of capital income in GDP. The method followed for ICP 2017 remains unchanged from ICP 2011; however, the underlying input data have been updated based on the most recent version of the Penn World Tables (PWT).

The TAG took note that the productivity adjustment factors are being estimated based on the ICP 2011 approach.

² In the Bills of Quantity approach, countries price complete construction projects based on detailed drawings and specifications. For more details, refer to [Chapter 11](#) of the Eurostat-OECD PPP manual.

Non-standard headings: Linking government with productivity adjustment

Yuri Dikhanov, World Bank, briefed the TAG on the approach for linking government with productivity adjustment.

The ICP 2011 round introduced adjustments for productivity differentials at the global level. At the regional level, Africa, Asia and the Pacific, and LAC used productivity adjustment, while the CIS, Eurostat-OECD, and Western Asia regions did not use adjustments for productivity differentials. The ICP 2011 linking approach for government, with productivity adjustment, was suggested for the ICP 2017 cycle without modifications. The approach ensures that fixity of the regional PPPs is preserved, irrespective of whether the region applies productivity adjustment at the regional level.

The TAG agreed that the same linking approach will be followed in ICP 2017 as in ICP 2011 without modifications.

Non-standard headings: Linking reference PPPs

Yuri Dikhanov briefed the TAG on the approach for linking reference PPP basic headings.

The ICP 2017 classification covers 155 basic headings; PPPs estimated for these headings are either based on actual prices collected or through referencing PPPs from other headings and market exchange rates. Linking the reference PPPs headings requires a special approach, as linking through global core list item prices is not possible. The suggested linking approach through regional geometric means of aggregated, unrestricted, global PPPs ensures that the reference PPP headings are linked, and that fixity of the regional results is maintained. This is similar in essence to the approach implemented within ICP 2011.

The TAG agreed to the proposed approach for linking the reference PPP headings.

Compiling housing PPPs and real expenditures in Asia

Kaushal Joshi, Asian Development Bank (ADB), briefed the TAG on a recently developed method for compiling housing PPPs in Asia.

Housing PPPs in Asia were imputed for the ICP 2011 using a reference volume approach, whereby the relative volumes of housing services between economies are equal to the relative volumes of household expenditure excluding rents. This “last resort” approach was ultimately used due to the challenges in carrying out direct rental or direct housing volume comparisons in Asia in 2011. For the ICP 2017 cycle, both approaches were tried again but they also yielded implausible results. As a result, ADB researched a new approach for estimating housing PPPs in Asia.

This new approach uses both direct rental and direct housing volume PPPs. Both sets of results are linked together after applying separate quality adjustments to each set of housing PPPs. The quality adjustment applied to the direct rental PPPs relies on relative PPP-adjusted per capita expenditure differentials and is based on the notion that the quality of a country’s dwellings increases linearly or non-linearly with PPP-adjusted per capita expenditure without housing. The quality adjustment for the direct housing volume PPPs is based on urbanization rates, with the underlying assumption being that in countries where a large portion of the population lives in urban areas, the average quality of dwellings is likely to be higher. The linking of the quality-adjusted direct rental and quality-adjusted direct housing volume PPPs is carried out

by selecting plausible results from each approach and filling gaps through a linking process similar to the one used in the Eurostat-OECD comparison for linking rental-based and housing volume-based results.

The new approach for housing yields more plausible results than the direct rental and direct housing volume approaches. The TAG agreed that, while the results of the new ADB approach are promising, further research and analytical work are needed to better assess the method and its implications. Accordingly, the TAG suggested that Asia should consider adopting the new method in the ICP 2020, when results per the new method are available for two cycles. The new approach could also be utilized retrospectively for the ICP 2017 cycle, when the results are being revised. Dilip Kumar Sinha, India's Ministry of Statistics and Programme Implementation, noted that this view is also echoed by the ICP Expert Committee of the Government of India.

For the ICP 2017 cycle, the TAG concluded that Asia should continue to apply the reference volume approach to ensure comparability with ICP 2011. However, the TAG welcomed further review and discussion of the new approach at its forthcoming meetings.

Non-standard headings: Linking housing

Paulus Konijn, Eurostat, briefed the TAG on the joint work with Alan Heston, University of Pennsylvania, on the methods explored to date for linking housing in ICP 2017.

Regional (average) per capita housing volume indexes from each method were presented. The linking methods in question are: (A) based on rental data only and an urban/rural adjustment to attempt to account for cross-country differences in urbanization levels; (B) based on housing volume data only; and (C) based on a mixture of rental and housing volume data. For the last method, two alternatives were explored: (C1) with Asia linked through housing volume data and (C2) with Asia linked through rental data. Method C1 was applied in ICP 2011 and results based on this approach were used in the calculation of the preliminary ICP 2017 results discussed at the meeting.

The TAG agreed that the same method for linking housing that was applied in ICP 2011 (i.e., method C1) should also be applied in ICP 2017 cycle. The need to maintain consistency between methods used in ICP 2011 and ICP 2017 was cited as the main reason for this decision. The second reason being the tight timeline between this meeting and the ICP 2017 results release date to properly explore and test alternative housing linking methods. The TAG welcomed further review and discussion of the different options for linking housing at its forthcoming meetings.

Building PPP timeseries

Prasada Rao, University of Queensland, presented joint work undertaken with Robert Inklaar, on the proposed approach for building PPP timeseries for 2012-2016.

The proposed approach for building PPP timeseries entails extrapolating 2011 PPPs and retropolating 2017 PPPs at the lowest level of detail possible, using CPIs, deflators, and exchange rates as extrapolation indices. Extrapolated and retropolated detailed data would subsequently be aggregated, and, as a final step, the two sets of results would be averaged geometrically, with weights based on the distance from the benchmark comparisons. The suggested approach would also incorporate regional interim results, where available, in order to maintain fixity of the interim regional results.

The TAG took note of the work done do date to build PPP timeseries. The authors, Global Office and the ICP Computation Task Team will further research the most feasible practical application of the approach, including discussion on the reliability of the final extrapolation indices, namely CPIs and national accounts deflators, and whether regional or global results should form the base for the extrapolations. The TAG will discuss the resulting PPP timeseries for 2012-2016 at its next meeting.

SESSION 3: RESULTS REVIEW

The TAG was briefed on the overall process for producing the ICP results, and efforts to ensure replicability and transparency of the production process. Furthermore, preliminary ICP 2017 results, their consistency with the revised ICP 2011, and key findings were also presented.

Overall process, replicability and transparency of ICP results

Marko Rissanen and Bettina Aten and Eric Figueroa, United States Bureau of Economic Analysis (BEA), briefed the TAG on the overall process, replicability and transparency of ICP results.

Since the establishment of the ICP Global Office as a permanent unit in the World Bank' Development Data Group (DECDG), the Global Office has overhauled its data management, validation, processing and dissemination processes, building on DECDG's corporate tools and Eurostat's PPP tools. In addition, the Global Office has been working closely with the ICP Computation Task Team, which was established at the behest of the TAG, to undertake parallel computations of ICP results for added quality assurance and transparency, and to ensure full documentation and replicability of ICP results. Furthermore, the Global Office has engaged BEA experts to advise on further enhancing its data and metadata management processes.

The TAG welcomed the ongoing efforts to strengthen ICP data and metadata management, validation, processing and dissemination processes.

Coverage and quality of the ICP 2017, revised ICP 2011 and PPP timeseries input data

Marko Rissanen briefed the TAG on the coverage and quality of the ICP 2017, revised ICP 2011 and PPP timeseries input data.

The inter-regional overlap between household consumption global core list items was high, with over 90 percent of items priced by at least two regions, ensuring that said items can be used for calculating inter-regional linking factors. Furthermore, the data quality of the latest submission has increased significantly over the previous submission. The few remaining issues have been identified and discussed during the 8th Inter-Agency Coordination Group (IACG) meeting in October 2019.

The quality of special survey data and national account expenditures required some additional validation. To this end, the regional implementing agencies have been provided with various validation documents, and the datasets are being revised accordingly, prior to finalizing the regional results. With regards to the datasets required for estimating the PPP timeseries, the completeness and quality of the datasets have increased steadily; however, the completeness of datasets varies between regions. The regional implementing agencies are addressing any remaining issues, per the feedback from the Global Office.

The TAG welcomed the data quality improvements and additional quality assurance efforts being carried out, especially for special survey data. In addition, the TAG suggested that some of the overlap statistics and quality indicators and graphics should be considered for inclusion in the final ICP report or made available to users through some other means.

Preliminary 2017 results, revised 2011 results, and consistency between benchmark years

Nada Hamadeh presented the preliminary 2017 results, revised 2011 results, and consistency between benchmark years for household consumption, actual individual consumption, GDP, and other selected aggregates. These results were calculated by the ICP Computation Task Team.

It was highlighted that the ICP 2017 results are still preliminary; however, PPPs for household consumption are stabilizing, while PPPs for GDP and other main aggregates are still under review and may change, as the underlying data are undergoing final validation. In addition, national accounts data are still preliminary and may be updated by countries, and some final updates are being introduced to reference PPPs and productivity adjustment factors. As for the ICP 2011 revisions, it was noted that these were mainly triggered by revisions in national accounts, regional PPPs and population figures.

Although there were differences between preliminary ICP 2017 PPPs and extrapolated ICP 2011 PPPs, the TAG found no clear systematic (upward or downward) drifts, as had been the case in ICP 2011 relative to ICP 2005, and in ICP 2005 relative to ICP 1996. The TAG concluded that the quality of the results had improved since the third TAG meeting and converged sufficiently to proceed with the computation of final results. In this regard, the TAG suggested that the Global Office and regional implementing agencies continue to finalize all underlying datasets and results, focusing especially on potential outliers flagged by the IACG and TAG, and that the ICP Computation Task Team subsequently undertakes the calculation of the final results.

Regarding the final publication of results, the TAG suggested to present the countries per their geographical groupings, instead of their administrative ICP regional groupings, as this will be more useful and intuitive to users. Furthermore, the final publication and related communication material should explain to users the differences between aggregates such as GDP, household final consumption and actual individual consumption, and their limitations in truly reflecting material well-being and the welfare of inhabitants.

Price levels in China: evidence from ICP 2011, ICP 2017 and CPI data

Xianchun Xu, Tsinghua University, presented an overview of Chinese prices levels and trends from the CPI and ICP for 2011 and 2017.

He explained that deviations between actual and extrapolated PPPs occur in most countries. He emphasized that the ICP 2017 household price data submitted by China reflect the true prices faced by Chinese consumers. As evidence, a comparison of average prices collected in China for both the ICP and CPI was shown, which revealed no systematic differences between prices from the two sources. It was also noted that Chinese prices in 2017 are quite high relative to other countries due to the high tax burden faced by Chinese sales enterprises such as supermarkets and shopping malls, among other reasons explained in the presentation.

The TAG took note of the detailed analysis and findings that were presented.

SESSION 4: TASK FORCES DELIVERABLES

The TAG was briefed on the progress with the deliverables of various Task Forces.

Strategy Paper on the Rolling Price Survey Approach

David Roberts, Independent Expert, presented the main points from his semi-final paper on the implementation of the rolling price survey approach (RPSA) at the global level.

It was highlighted that it was too late to properly introduce and implement the RPSA for the ICP 2020 cycle. Furthermore, moving to the RPSA would have required close coordination between the Global Office, regions and countries to reach an agreement on the strict adherence to a global ICP 2020 RPSA timetable.

Furthermore, it was emphasized that proper implementation of the RPSA in ICP 2023 will require all actors involved to start preparing the groundwork for implementation while the ICP 2020 is underway. This would entail having all regions agree to implement the RPSA or reaching an agreement on how regions employing different approaches will work together to produce the global comparison.

The TAG agreed that it is not feasible to start implementing the RPSA in ICP 2020. However, it acknowledged that proper implementation of the RPSA is a long-term objective to work toward.

Guide on CPI-PPP Integration

Patrick Kelly, Statistics South Africa, presented joint work with Prasada Rao on a guide for CPI-PPP integration. The guide will help inform and guide country practices for integrating CPI and PPP production processes and is targeted towards national price statisticians.

The guide will build on country case studies and include advice and recommendations based on concrete experiences and expertise of country-practitioners from selected pioneer countries on this topic, e.g. India, South Africa and the United Kingdom.

The next steps in the development of this guide entails editing and extending the case studies, expanding the text to cover services, and circulating the document to stakeholders for comments.

The TAG took note of the progress with the CPI-PPP integration guide. It also stressed the importance of recognizing the inherent differences faced by countries at different levels of development when producing CPIs and PPPs and attempting to integrate the production processes of these indices.

Guide on Sub-National PPPs

Luigi Biggeri, University of Florence, presented work carried out jointly with Prasada Rao on a guide for the compilation of sub-national PPPs.

A guide on sub-national PPPs is being developed in response to recommendations from the United Nations Statistician Commission and demand from countries. This guide is designed to help inform and guide country practices when setting up a program to produce subnational PPPs.

The next steps in the development of this guide entail revising the manuscript based on the comments and suggestions from the meeting, adding some material on producing a more generic spatial sub-national consumer price index, and including in appendix some relevant country experiences. The Global Office will gather information from ICP regional implementing agencies on which countries in each region are compiling or are interested in compiling sub-national PPPs.

The TAG took note of the work undertaken to develop the guide and that countries, particularly in Asia, are interested in the topic of sub-national PPPs. It reminded the meeting that the challenges and obstacles faced at the country-level when promoting the compilation of ICP PPPs will be quite different from those encountered when promoting the compilation of sub-national PPPs. It was pointed out that while sub-national PPPs present an opportunity to engage with national policy-makers on the issue of PPPs, the decision to implement such exercises would fall under national statistical programs.

CONCLUSIONS AND NEXT STEPS

The Global Office will keep the TAG informed of the progress with finalizing the ICP 2017 cycle results. The next meeting of the TAG will be held on February 20-21, 2020, in Washington, DC. The first day will be devoted to reviewing the final ICP 2017 cycle results, including the revised ICP 2011 results and PPP timeseries. The second day will encompass discussions on the ICP Research Agenda and future research priorities.

Annex 1: Meeting Agenda

Welcome and opening remarks

Session 1: Progress with implementing the ICP 2017 cycle, research agenda, and overall timetable

Session 2: Methodology overview

Linking regional results into a global set of results

Special case: Linking CIS to Eurostat-OECD

Special case: Linking the Caribbean and countries with partial participation

Special case: Linking Georgia and Ukraine

Special case: Linking Iran and dual-participation countries

Moving regions: Colombia and Costa Rica's results within OECD

Non-standard headings: Linking health and education

Non-standard headings: Linking construction and civil engineering

Calculation of productivity adjustment factors

Non-standard headings: Linking government with productivity adjustment factors

Non-standard headings: Linking reference PPPs

Compiling housing PPPs and real expenditures in Asia

Non-standard headings: Linking housing

Building PPP time series

Session 3: Results review

Overall process, replicability and transparency of ICP results

Coverage and quality of the ICP 2017, revised ICP 2011 and PPP timeseries input data

First preliminary 2017 results, revised 2011 results, and consistency between benchmark years

Price levels in China: evidence from ICP 2011, ICP 2017 and CPI data

Session 4: Task Force deliverables

Strategy Paper on the Rolling Price Survey Approach

Guide on CPI-ICP Integration

Guide on Sub-National PPPs

Conclusions and next steps

Annex 2: List of Participants

ICP Technical Advisory Group Members

- Sir Angus Deaton, Chair, Princeton University
- Paul Schreyer, Alternate Chair, Organisation for Economic Co-operation and Development
- W. Erwin Diewert, University of British Columbia
- Robert Feenstra, University of California - Davis
- Alan Heston, University of Pennsylvania
- D. Prasada Rao, University of Queensland
- Xianchun Xu, Tsinghua University

Task Force Members

- Bettina Aten, United States Bureau of Economic Analysis
- David Roberts, Independent Expert
- Dilip Kumar Sinha, Ministry of Statistics and Programme Implementation, India
- Francette Koechlin, Organisation for Economic Co-operation and Development
- Kaushal Joshi, Asian Development Bank
- Luigi Biggeri, University of Florence
- Majed Skaini, United Nations Economic and Social Commission for Western Asia
- Michel Mouyelo-Katoula, African Development Bank
- Patrick Kelly, National Statistical Office, South Africa
- Paulus Konijn, Eurostat
- Robert Hill, University of Graz
- Robert Inklaar, University of Groningen (via webex)
- Sergey Sergeev, Independent Expert

ICP Global Office

- Haishan Fu, World Bank
- Nada Hamadeh, World Bank
- Yuri Dikhanov, World Bank
- Marko Rissanen, World Bank
- Maurice Nsabimana, World Bank
- Mizuki Yamanaka, World Bank
- Inyoung Song, World Bank
- William Vigil-Oliver, World Bank
- Rui Costa, World Bank
- Elizabeth Purdie, World Bank
- Zhe Zhao, World Bank
- Nancy Kebe, World Bank

Observers

- Andrey Kosarev, CIS-STAT
- Chen Hong, National Bureau of Statistics, China
- Bruno Lana, United Nations Economic Commission for Latin America and the Caribbean
- Giovanni Savio, United Nations Economic Commission for Latin America and the Caribbean (via WebEx)
- Gregoire Mboya De Loubassou, African Development Bank