



**INTERNATIONAL COMPARISON PROGRAM
SECOND MEETING OF THE TECHNICAL ADVISORY GROUP**

**PPP COMPILATION AND COMPUTATION TASK FORCE
PROGRESS REPORT**

May 2018

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Introduction

The Task Force for *Purchasing Power Parity (PPP) Compilation and Computation* works towards addressing the following four International Comparison Program (ICP) [Research Agenda](#) topics: 1) Linking interim regional updates into a global comparison; 2) Building PPP time series for the interim period; 3) Fine tuning global linking procedures; and 4) Productivity adjustment for government and construction labor.

The Task Force is formed of the following experts and practitioners in field of index numbers, PPPs, price statistics and national accounts:

- Erwin Diewert, Task Force Coordinator, University of British Columbia
- Paulus Konijn, Eurostat
- Marshall Reinsdorf, International Monetary Fund (IMF)
- Francette Koechlin, Organisation for Economic Co-operation and Development (OECD)
- Vasily Kuznetsov, Russian Federal State Statistics Service (ROSSTAT)
- Sergey Sergeev, Statistics Austria
- Robert Hill, University of Graz
- Robert Inklaar, University of Groningen
- Prasada Rao, University of Queensland
- Yuri Dikhanov, World Bank
- Marko Rissanen, World Bank

The Task Force has a fixed tenure of two and a half years, from July 2017 to December 2019, in-line with the implementation timeframe of the above noted Research Agenda topics. To date, the Task Force has met twice, on October 26, 2017 and on March 13, 2018 in Washington, DC. The next meeting is scheduled to be held in fall 2018, tentatively in conjunction with the sixth Inter-Agency Coordination Group (IACG) meeting. All meeting documents, presentations and minutes are available on the [Task Force's page](#) on the ICP website. Furthermore, Attachments 1 and 2 to this document provide minutes for the Task Force's first two meetings.

This report outlines progress made to date on the research topics assigned to the Task Force, for the information of the ICP Technical Advisory Group (TAG) at its second meeting. It should be noted that the assigned research topics, and related specific tasks, overlap to a certain extent; for example, an approach to build global PPP time series (Topic 2) has to account for linking the regional interim updates (Topic 1). Furthermore, achievable progress highly depends on the availability and quality of the various required datasets.

Topic 1: Linking interim regional updates into a global comparison

The main deliverable for this Research Agenda topic is to develop and apply an approach for linking interim regional updates or comparisons into a global comparison.

Since the completion of the 2011 ICP round, several regions have conducted interim updates or full comparisons. However, these regional efforts were not mandatory and depended largely on the initiatives of the respective Regional Implementing Agencies.

As of now, the following interim updates or full comparisons are foreseen to be available:

- Africa: 2015-2016 updates for household consumption (HHC)
- Asia and the Pacific: 2016 update for gross domestic product (GDP)

- Commonwealth of Independent States (CIS): 2014 comparison for GDP¹
- Latin America and Caribbean (LAC): No interim updates or comparisons
- Western Asia: 2012-2016 comparisons for GDP²
- Eurostat-OECD: 2012-2016 comparisons for GDP

The main challenge is linking and incorporating the regional updates and comparisons that vary in terms of timing, country coverage and survey coverage into a global set of PPPs; for example, the People's Republic of China is not part of the Asia's 2016 update and no interim updates or comparisons are available for the LAC region. It should also be noted that the interim updates prior the ICP 2011 round have not been incorporated into a global set of PPPs; hence, the Task Force cannot rely on any pre-established practice or approach.

During the first meeting of the Task Force, a series of specific tasks were identified in relation to this research topic. Below is the list of specific tasks and progress made to date:

- a. Validating available interim global data to ensure quality and comparability of the data: The National, Regional and Global Implementing Agencies are in process of validating and updating the available interim data. The next major milestone is an agreed submission of all interim and 2017 cycle to the Global Implementing Agency by July 2018, for a subsequent review and discussion at the sixth IACG meeting and third Task Force meeting, scheduled for fall 2018.
- a. Determining the most feasible approach for linking interim regional updates in to a global comparison, considering available data and results: The approach is subject to the final data availability and comparability. However, incorporating the regional interim updates and comparisons into a global set of PPPs is expected to improve the reliability and coherence of the global PPP time series.

Topic 2: Building PPP time series for the interim period

The main deliverable for this Research Agenda topic is to develop and apply approach for building PPP time series for the interim period from 2012 to 2016.

As the 2017 ICP cycle is being implemented, the Global ICP Unit recognizes the need to fill the gap for the intervening period between 2011 and 2017 comparisons. The current timetable envisages releasing estimates for the years 2012 to 2016 around the same time as the release of results for the reference year 2017. Simultaneous release of the 2017 results and estimates for the interim years will allow for providing users with a more reliable and coherent PPP time series.

During the first meeting of the Task Force, a series of specific tasks were identified in relation to this research topic. Below is the list of specific tasks and progress made to date:

- a. Updating, validating and enhancing the global extrapolation database: A global extrapolation database covering detailed consumer price indices, national accounts deflators, national accounts expenditures, population and exchange rates has been established and shared with the Task Force. However, the level of detail and coverage varies from a year and country to another. A Task Team comprising the IMF, the United Nations Statistics Division (UNSD) and the World Bank has been established to assess and improve the availability and quality of the data for extrapolation.

¹ 2014 results for the eight CIS countries, including the Russian Federation, are already linked to the Eurostat-OECD comparison.

² Regional results for the years 2012-2016 are based on extrapolations from 2011 and 2016 reference year collections, as well additional data collections for a given reference year.

The National, Regional and Global Implementing Agencies are continuing their efforts to expand and improve the availability and quality of the data.

- b. Updating the paper "A move towards the compilation of PPPs and real expenditures on an annual basis" based on the most recent extrapolation data: Several iterations of the paper have been submitted for the Task Force's review; however, completion of the paper and related proposals depends on the availability of the underlying datasets that are currently being validated and updated by the various Implementing Agencies and the above noted Task Team.
- c. Determining optimal level for extrapolation and publication of interim results, considering the availability and quality of data required for extrapolation and minimizing the impact of changes in terms of trade: As for the previous research topic, determining optimal level for extrapolation and publication of interim results depends on the availability and quality of the datasets. In theory, extrapolation at a more detailed level yields more reliable results; however, potential issues with detailed extrapolation indices can impact the reliability and quality of the results. The Task Force continues to review and assess the available datasets to determine the optimal level for extrapolation and publication of the ICP results.
- d. Determining the most feasible approach for producing "interpolated" PPP timeseries for the years between the 2011 and 2017 reference year comparisons: A proposal for producing "interpolated" PPP timeseries has been drafted by Prasada Rao and Robert Inklaar. This proposal will be presented and discussed at the second meeting of the TAG (refer to the Agenda item 1.1 – *Interpolation between benchmark years*).
- e. Developing an approach to produce benchmark and PPP time-series for non-participating countries: The work on this task has not yet been initiated. However, both the 2005 and 2011 ICP rounds introduced approaches to impute result for non-participating countries.
- f. Determining the need to recalculate the global ICP 2011 results, if regional ICP 2011 results are significantly revised: The Task Force has initiated the discussion on the need, feasibility and possible approach to recalculate the ICP 2011 results. It should be noted, for example, that several African countries have significantly revised their GDP estimates since the publication of the ICP 2011 results.

Topic 3: Fine tuning global linking procedures

The main deliverable for this Research Agenda topic is to develop and apply approach for fine tuning the global linking procedures, if and where possible.

The global linking in the 2011 ICP based on the global core approach and country aggregation with redistribution (CAR) procedure is rather straightforward. However, the actual linking had many exceptions, such as dual regional participation of some countries (Russia, Egypt and Sudan); singleton countries, Cuba, the Caribbean and Pacific islands being linked indirectly to the global comparison via other regions and individual countries; and the CIS countries being linked to the Eurostat-OECD comparison via Russia. Furthermore, some GDP components also posed challenges for linking, as the Eurostat-OECD approach for those components differed from that followed by ICP regions.

During the first meeting of the Task Force, a series of specific tasks were identified in relation to this research topic. Below is the list of specific tasks and progress made to date:

- a. Examining possible options for fine-tuning the linking of hard-to-measure headings - Housing: A separate Task Force for housing related issues has been established.

- a. Compiling and validating government compensation and expenditure for 2015, 2016 and 2017 for health, education and collective services for all Eurostat-OECD countries: Eurostat and the OECD have initiated the work to compile government compensation data and related expenditures as per the ICP requirements.
- b. Examining possible options for fine-tuning the linking of hard-to-measure headings - Health: The work on this task has not yet been initiated.
- b. Examining possible options for fine-tuning the linking of hard-to-measure headings - Education: The work on this task has not yet been initiated.
- c. Examining possible options for fine-tuning the linking of hard-to-measure headings - Collective Services: The work on this task has not yet been initiated.
- d. Compiling and validating construction data for 2017 as per the ICP approach for a selection of Eurostat-OECD countries: Eurostat and the OECD have initiated the work to collect and compile construction data and related expenditures as per the ICP requirements.
- e. Examining possible options for fine-tuning linking of hard-to-measure headings - Construction: The work on this task has not yet been initiated.
- f. Assessing the impact of changing linking approach - The CIS case: A preliminary note on the impact of changing linking approach has been drafted; the Task Force is foreseen to review and discuss the draft at its next meeting.
- c. Assessing the impact of countries moving from one region to another - The LAC case: The Regional Implementing Agencies for the OECD and LAC have agreed to share information for assessing the impact of selected countries, namely Colombia and Costa Rica, moving from the LAC region to the OECD comparison.
- d. Examining possible options for producing global results for dual-participating countries - The Africa-Western Asia case: The Regional Implementing Agencies for Africa and Western Asia have agreed to share information for the dual-participant countries, namely Egypt, Libya, Morocco and Sudan, in order to reduce the data collection burden on the countries and allow for examining options for producing global results for the dual-participating countries. Furthermore, a dedicated dual-participation meeting between the Regional Coordinators and Global ICP Unit has been scheduled for June 2018.
- e. Researching alternative linking approaches, such as estimating linking factors based on global core price data only, exclusion of weak links, and multi-stage linking approaches: To date, two topics, namely *"A least-squares approach to imposing within-region fixity in the ICP and Spatial Chaining of Price Indexes"* and *"Price Indexes at Basic Heading Level: Within-Region Comparisons and Global Linking"* by Robert Hill have been presented to the Task Force.

Topic 4: Productivity adjustment for government and construction labor

The main deliverable for this Research Agenda topic is to develop and apply approach for productivity adjustment for government and, potentially, for construction labor.

Adjustment for productivity differentials across countries has been a major ICP initiative in the 2005 and 2011 rounds, designed to improve PPPs for government compensation. There are a number of outstanding issues for consideration in the 2017 ICP cycle. The following excerpt from the United Nations Statistical Commission (UNSC) Friends of the Chair (FOC) report summarizes the state of play with

productivity adjustments: “The use of a productivity adjustment for global linking of salaries in government services in ICP 2011 was an obvious improvement. There were, however, several weaknesses: the productivity adjustment calculated using capital-labor estimates for the whole economy for such specific areas as health, education and collective services is a very rough approximation (also, the accuracy of productivity adjustment factors for different countries seem to be different), and not all regions used productivity adjustment in the regional comparisons. In addition, the regions did not use the same methodology (e.g., OECD/Eurostat used the “output” approach for health/hospital services and education but other regions used the “input cost” approach). In effect, the results of the countries depend, in some cases heavily, on the regional methodology, and interregional comparability was decreased.” (Paragraph 37, E/CN.3/2016/9, UN, 2016).

During the first meeting of the Task Force, a series of specific tasks were identified in relation to this research topic. Below is the list of specific tasks and progress made to date:

- a. Documenting the 2011 approach for applying productivity adjustment for the government sector: Initial review on the ICP 2011 for applying productivity adjustment for government sector was presented at the first meeting of the Task Force. However, the documentation is yet to be extended and formalized.
- b. Updating the productivity adjustment factors for the 2017 cycle and developing an estimation approach for the interim years: A proposal for updating the productivity adjustment factors for the 2017 cycle has been drafted by Robert Inklaar. This proposal will be presented and discussed at the second meeting of the TAG (refer to the Agenda item 1.2 – *Productivity adjustment factors for labor*).
- c. Assessing the feasibility and impact of applying productivity adjustments for the construction sector: The work on this task has not yet been initiated. However, the difficulty of making reasonable adjustment was commented on at the first meeting of the Task Force, based on the ICP 2011 round experiences.

Conclusions

As noted in the introduction to this document, the progress with the research topics assigned to the Task Force depends on the availability and quality of the various related datasets, including the interim regional updates as well as datasets included in the extrapolation database. The sixth IACG meeting, and the subsequent third Task Force meeting scheduled for fall 2018, are expected to make preliminary recommendations and conclusions on various issues and tasks at hand. However, as of now, the Task Force is looking forward to the feedback and recommendations on the two topics discussed at the TAG’s second meeting, namely *Interpolation between benchmark years* and *Productivity adjustment factors for labor*.

Attachment 1: Minutes of the Task Force meeting – October 2017

Minutes of the 1st Meeting of the ICP Task Force on PPP Computation and Time Series October 26, 2017 World Bank, Washington, DC

Welcome and Meeting Objectives

The first meeting of the International Comparison Program (ICP) Task Force on Purchasing Power Parity (PPP) Computation and Time Series was held on October 26, 2017 at the World Bank headquarters in Washington, DC.

The main objectives of the meeting were to discuss the Terms of Reference for the Task Force, and to initiate discussions on various ICP Research Agenda topics assigned to the Task Force, as per the agenda provided in Annex 1. The meeting participants are listed in Annex 2.

Nada Hamadeh, ICP Global Lead, World Bank, opened the meeting by welcoming the participants and highlighting the crucial role the Task Force plays in producing the results for the reference year 2017, as well as for the years between the 2011 and 2017 comparisons.

Background and Terms of Reference

The following presentations were made:

- [Terms of Reference for the Task Force](#), Global ICP Unit, World Bank
- [Availability of interim data and extrapolation indices](#), Global ICP Unit, World Bank

Agreements and conclusions:

- The Task Force accepted the proposed Terms of Reference.
- Erwin Diewert, ICP Technical Advisory Group member, was selected to be the Task Force coordinator.

Building PPP Time Series for the Interim Period

The following presentation was made:

- [A move towards the compilation of PPPs and real expenditures on an annual basis](#), Prasada Rao and Robert Inklaar

Agreements and conclusions:

- PPP time-series will cover the years from 2011 onwards; an extension to years before 2011 can be considered at a later stage.
- The Task Force will determine the most feasible approach for producing “smoothened” PPP time-series for the years between the 2011 and 2017 reference year comparisons.

- The Task Force will determine the optimal level for extrapolation and publication of interim results, considering the availability and quality of data required for extrapolation; in addition, the extrapolation approach should minimize the impact of changes in terms of trade.
- An approach to produce benchmark and PPP time-series for non-participating regions/countries should be developed by the Task Force.
- If regional ICP 2011 results are significantly revised, the need to recalculate the global ICP 2011 results will be considered and determined by the Task Force
- The Global ICP Unit will provide the Task Force with a summary of the revisions introduced to the ICP classification in the ICP 2017 cycle.
- The Global ICP Unit will provide the Task Force with the latest iteration of extrapolation database in January 2018; in addition, the Global ICP Unit will set-up a task team jointly with the International Monetary Fund (IMF) to validate and enhance the extrapolation data.
- Robert Inklaar and Prasada Rao will update their paper “A move towards the compilation of PPPs and real expenditures on an annual basis” to reflect the latest extrapolation data and make it available for discussion at the next Task Force meeting.

Linking Interim Regional Updates into a Global Comparison

The following presentations were made:

- [Options for linking interim regional updates into a global comparison](#), Sergey Sergeev
- [Options for linking interim regional updates into a global comparison](#), Yuri Dikhanov

Agreements and conclusions:

- The Task Force will determine the most feasible approach for linking interim regional updates in to a global comparison, considering available data and results.
- The Global ICP Unit will continue to validate the available “interim” data to ensure quality and comparability of the data, in collaboration with the Regional Implementing Agencies.
- The impact of changing regional and/or country compositions on linking will be investigated by the Task Force.

Fine Tuning Global Linking Procedures

The following presentations were made:

- [Overall linking approach and exceptions in ICP 2011](#), Yuri Dikhanov
- [Linking health and construction in ICP 2011 and proposed approach for ICP 2017 cycle](#), Paulus Konijn
- [Linking education in ICP 2011 and proposed approach for ICP 2017 cycle](#), Francette Koechlin
- [A least-squares approach to imposing within-region fixity in the ICP and Spatial Chaining of Price Indexes](#), Robert Hill

Agreements and conclusions:

- The Task Force will determine potential avenues for fine-tuning global linking procedures in relation to special country participation cases and specific GDP headings (such as health, education, housing and construction); however, the broad linking methodology employed in ICP 2011 should be maintained as per the United Nations Statistical Commission and the ICP Governing Board recommendations.

- Eurostat and OECD will provide government compensation data covering the years 2015, 2016 and 2017 for health, education and collective services for all participating countries for global linking purposes; however, compiling the related expenditure data requires additional considerations.
- Eurostat and OECD will provide construction data covering the year 2017 as per the ICP approach for a selection of countries for global linking purposes.
- A detailed description and impact analysis of the slightly-modified 2014 linking approach for the Commonwealth of Independent States (CIS) will be presented by the Interstate Statistical Committee of the CIS (CIS-STAT).
- Alternative linking approaches, such as estimating linking factors based on global core price data only, exclusion of weak links, and multi-stage linking approaches will be examined by the Task Force as research topics.

Productivity Adjustment for Government and Construction Sectors

The following presentations were made:

- [Compilation of productivity adjustment factors](#), Robert Inklaar
- [Application of productivity adjustment factors in the ICP 2011 linking procedures](#), Yuri Dikhanov

Agreements and conclusions:

- Productivity adjustment factors will be updated for the years from 2011 onwards; however, the specific estimation approach, especially for interim-years, needs to be determined.
- The feasibility and impact of applying productivity adjustments for construction sector are to be studied by the Task Force.
- The approach for applying productivity adjustment for government sector needs to be documented in detail by the Task Force for increased transparency.

Any Other Business

Agreements and conclusions:

- The Global ICP Unit will set-up a dedicated [Microsoft OneDrive folder](#) for information sharing and invite the Task Force members to join the folder.
- The Global ICP Unit will draft confidentiality statement agreements to be signed by the Task Force, similarly to the 2011 ICP practice.
- The Global ICP Unit will circulate the 2011 ICP Computation Task Force (CoTaf) minutes to the Task Force.
- The Task Force Coordinator, with the support of the Global ICP Unit, will draft a work program that the Task Force should tackle (Annex 3).
- The next meeting of the Task Force will be organized in conjunction with the Inter-Agency Coordination Group meeting, most likely in March 2018.

Annex 1: Meeting Agenda

Thursday, October 26, 2017

08:30 – 09:00	Breakfast
Task Force	PPP Compilation and Computation
09:00 – 10:30	Background and TORs <ul style="list-style-type: none"> – Overall objectives, <i>Nada Hamadeh</i> – Terms of Reference for the Task Force, <i>Marko Rissanen</i> – Availability of interim data and extrapolation indices, <i>Marko Rissanen</i>
10:30 – 11:30	Building PPP time series for the interim period <ul style="list-style-type: none"> – A move towards the compilation of PPPs and real expenditures on an annual basis, <i>Prasada Rao and Robert Inklaar</i>
11:30 – 12:30	Linking interim regional updates into a global comparison <ul style="list-style-type: none"> – Options for linking interim regional updates into a global comparison, <i>Sergey Sergeev</i> – Options for linking interim regional updates into a global comparison, <i>Yuri Dikhanov</i>
12:30 – 14:00	Lunch
14:00 – 15:00	Fine tuning global linking procedures <ul style="list-style-type: none"> – Overall linking approach and exceptions in ICP 2011, <i>Yuri Dikhanov</i> – Linking health, education and construction in ICP 2011 and proposed approach for ICP 2017 cycle, <i>Francette Koechlin and Paulus Konijn</i> – A least-squares approach to imposing within-region fixity in the ICP and Spatial Chaining of Price Indexes, <i>Robert Hill</i>
15:00 – 16:00	Productivity adjustment for government and construction sectors <ul style="list-style-type: none"> – Compilation of productivity adjustment factors, <i>Robert Inklaar</i> – Application of productivity adjustment factors in the ICP 2011 linking procedures, <i>Yuri Dikhanov</i>
16:00 – 17:00	Way forward

Annex 2: List of Participants

Task Force Members

- Paulus Konijn, Eurostat
- Massimiliano Iommi, IMF
- Francette Koechlin, OECD
- Vasily Kuznetsov, ROSSTAT
- Sergey Sergeev, Statistics Austria
- Robert Hill, University of Graz
- Robert Inklaar, University of Groningen
- Prasada Rao, University of Queensland
- Marko Olavi Rissanen, World Bank
- Yuri Dikhanov, World Bank

Global ICP Unit

- Nada Hamadeh, World Bank
- Mizuki Yamanaka, World Bank
- Maurice Nsabimana, World Bank
- William Vigil Oliver, World Bank
- Inyoung Song, World Bank
- Hanan AbuShanab, World Bank

Regional Implementing Agencies

- Gregoire Mboya Deloubassou, African Development Bank
- Rees Mpofu, African Development Bank
- Anouar Chaouch, African Development Bank
- Kaushal Joshi, Asian Development Bank
- Marjanca Gasic, Eurostat
- Andrey Kosarev, Interstate Statistical Committee of the Commonwealth of Independent States
- Valerica Accibas, Interstate Statistical Committee of the Commonwealth of Independent States
- Majed Skaini, UN Economic and Social Commission for Western Asia
- Federico Dorin, UN Economic Commission for Latin America and the Caribbean
- Maria Paz Collinao, UN Economic Commission for Latin America and the Caribbean

Experts

- Dilip Kumar Sinha, India Ministry of Statistics and Program Implementation
- Patrick Kelly, National Statistical Office of South Africa
- Luigi Biggeri, University of Florence
- Alan Heston, University of Pennsylvania

Annex 3: Task Force Work Program

Topic	Task	Responsible	Sub-Coordinator	
1. Building PPP Time Series for the Interim Period	a.	Updating, validating and enhancing the global extrapolation database.	ICP Inter-Agency Coordination Group	Marko
	b.	Updating the paper "A move towards the compilation of PPPs and real expenditures on an annual basis" based on the most recent extrapolation data.	Prasada Rao, Robert Inklaar	Robert I.
	c.	Determining optimal level for extrapolation and publication of interim results, considering the availability and quality of data required for extrapolation and minimizing the impact of changes in terms of trade.	Sergey Sergeev, Yuri Dikhanov	Yuri
	d.	Determining the most feasible approach for producing "smoothened" PPP time-series for the years between the 2011 and 2017 reference year comparisons; an extension to years before 2011 can be considered at a later stage.	Prasada Rao, Robert Inklaar, Sergey Sergeev, Yuri Dikhanov	Prasada
	e.	Developing an approach to produce benchmark and PPP time-series for non-participating countries.	Prasada Rao, Robert Inklaar, Sergey Sergeev, Yuri Dikhanov	Sergey
	f.	Determining the need the need to recalculate the global ICP 2011 results, if regional ICP 2011 results are significantly revised.	Task Force to decide later	Erwin
2. Linking Interim Regional Updates into a Global Comparison	a.	Validating available interim global data to ensure quality and comparability of the data.	ICP Inter-Agency Coordination Group	Marko
	b.	Determining the most feasible approach for linking interim regional updates in to a global comparison, considering available data and results.	Erwin Diewert, Sergey Sergeev, Yuri Dikhanov	Erwin
3. Fine Tuning Global Linking Procedures	a.	Examining possible options for fine-tuning the linking of hard-to-measure headings: Housing.	Task Force on Housing	Paul
	b.	Compiling and validating government compensation and expenditures for 2015, 2016 and 2017 for health, education and collective services for all Eurostat-OECD countries.	Eurostat, OECD	Francette
	c.	Examining possible options for fine-tuning the linking of hard-to-measure headings: Health.	Paul Konijn, Francette Koechlin	Paul
	d.	Examining possible options for fine-tuning the linking of hard-to-measure headings: Education.	Francette Koechlin	Francette
	e.	Examining possible options for fine-tuning the linking of hard-to-measure headings: Collective Services.	Paul Konijn, Francette Koechlin	Paul

Topic	Task		Responsible	Sub-Coordinator
	f.	Compiling and validating construction data for 2017 as per the ICP approach for a selection of Eurostat-OECD countries.	Eurostat, OECD	Francette
	g.	Examining possible options for fine-tuning linking of hard-to-measure headings: Construction.	Paul Konijn, Francette Koechlin, Marko Rissanen	Paul
	h.	Assessing the impact of changing linking approach: The CIS case.	CIS-STAT, Sergey Sergeev, Vasily Kuznetsov	Sergey
	i.	Assessing the impact of countries moving from one region to another: The LAC case.	ECLAC, OECD	Francette
	j.	Examining possible options for producing global results for dual-participating countries: The Africa-Western Asia case.	Sergey Sergeev, Yuri Dikhanov, AFDB, ESCWA	Yuri
	k.	Researching alternative linking approaches, such as estimating linking factors based on global core price data only, exclusion of weak links, and multi-stage linking approaches.	Erwin Diewert, Robert Hill	Robert H.
4. Productivity Adjustment for Government and Construction Sectors	a.	Documenting the 2011 approach for applying productivity adjustment for government sector.	Yuri Dikhanov	Yuri
	b.	Updating the productivity adjustment factors for the 2017 comparison and developing an estimation approach for the interim years.	Robert Inklaar, Yuri Dikhanov	Robert I.
	c.	Assessing the feasibility and impact of applying productivity adjustments for construction sector.	Robert Inklaar, Marko Rissanen	Robert I.

Attachment 2: Minutes of the Task Force meeting – March 2018

Minutes of the 2nd Meeting of the ICP Task Force on PPP Computation and Time Series March 13, 2018 World Bank, Washington, DC

Welcome and Meeting Objectives

The second meeting of the International Comparison Program (ICP) Task Force on Purchasing Power Parity (PPP) Computation and Time Series was held on March 13, 2018, at the World Bank headquarters in Washington, DC.

The main objective of the meeting was to review the progress to date on various ICP Research Agenda topics assigned to the Task Force, as per the agenda provided in Annex 1. The meeting participants are listed in Annex 2.

Introductory Remarks

The following presentation was made:

- [Task Force task list and meeting objectives](#), Erwin Diewert, University of British Columbia, and Marko Rissanen, Global ICP Unit, World Bank

Agreements and conclusions:

- The Task Force took note of the progress made to date on the ICP Research Agenda topics assigned to the Task Force and approved the agenda for the Task Force's second meeting.

Availability of Interim Data and Extrapolation Indices

The following presentation was made:

- [Status and way forward](#), Marko Rissanen, Global ICP Unit, World Bank

Agreements and conclusions:

- The Task Force took note on the progress made with building the extrapolation database and reviewing the available interim data.
- The Global ICP Unit and Regional Implementing Agencies will continue their efforts to review and validate the interim data.
- The Global ICP Unit, International Monetary Fund (IMF) and United Nations Statistical Commission (UNSD) are setting-up a task team to further validate the extrapolation data.
- The Regional Implementing Agencies will continue their efforts to provide the Global ICP Unit with most comprehensive extrapolation datasets possible, taking into account the regional circumstances.
- In order to account for all levels of available data, the global submission forms for extrapolation data, and subsequent extrapolation database, should be extended to cover the full ICP classification of 155 basic heading.

Linking Interim Regional Updates into a Global Comparison

The following presentations and interventions were made:

- Updates on Asia’s interim regional update and treatment of non-participating countries, Kaushal Joshi, Asian Development Bank (ADB)
- [Updates on Western Asia’s interim regional updates and treatment of non-participating countries](#), Majed Skaini, United Nations Economic and Social Commission for Western Asia (UN-ESCWA)
- Updates on Africa’s 2015/2016 data, Michel Mouyelo- Katoula, African Development Bank (AfDB)
- Linking specific headings for Eurostat-OECD countries for interim years, Paulus Konijn (Eurostat)

Agreements and conclusions:

- The Task Force took note of the various regional interim activities.
- The AfDB will conduct a detailed review of the collected 2015-16 household consumption data at the forthcoming Regional Expert Group (REG) meeting, scheduled for April 2018.
- The ADB will continue their efforts to validate interim 2016 data, covering all expenditure headings, with the participating countries at regional level, and with the Global ICP Unit at the global level.
- The UN-ESCWA will continue their efforts to produce regional results for 2016.
- Eurostat and the OECD will collect and provide the required data for linking government and construction related headings at the global level.
- The Task Force will continue to review the options for linking interim regional updates into a global comparison based on data availability, comparability and quality.

Productivity Adjustment for Government

The following presentation was made:

- [Options for updating and applying productivity adjustment factors for interim years and 2017 cycle](#), Robert Inklaar, University of Groningen

Agreements and conclusions:

- The Task Force took note of the progress made with approaches and options for estimating the productivity adjustment factors.
- It was agreed that the ICP Technical Advisory Group (TAG) should be presented with options for estimating the productivity factors, including possibilities for using updated input data or using updated input data and improved estimation method.
- Furthermore, depending on the approach for producing PPP-timeseries, an approach to produce productivity adjustment factors for the interim years may be required.

Building PPP Time Series for the Interim Period

The following presentations were made:

- [Update of paper “A move towards the compilation of PPPs and real expenditures on an annual basis”](#), Prasada Rao, University of Queensland, and Robert Inklaar, University of Groningen.
- [Options for determining optimal extrapolation level and indices](#), Yuri Dikhanov, Global ICP Unit, World Bank
- [Options for determining optimal extrapolation level and indices](#), Sergey Sergeev, Statistics Austria

- [Options for producing smoothened PPP time-series for the years between reference year comparisons](#), Prasada Rao, University of Queensland, and Robert Inklaar, University of Groningen

Agreements and conclusions:

- The Task Force took note on the progress made with building PPP-timeseries for the interim period.
- It was agreed that the ICP Technical Advisory Group (TAG) should be presented with options for interpolation between the reference year comparisons.
- It was noted that both the level of interpolation, as well as the level of publication, depends profoundly on the availability and quality of the interim data and extrapolation indices.
- The need, feasibility and approach to recalculate the ICP 2011 results should be considered.
- The Inter-Agency Coordination Group (IACG) should further discuss the roles and responsibilities of global and regional agencies for producing the extrapolated regional results.

Alternative Options for Linking Regions at Basic Heading Level

The following presentations and interventions were made:

- [Alternative options for linking regions at basic heading level](#), Robert Hill, University of Graz

Agreements and conclusions:

- The Task Force took note of the alternative options for linking regions at basic heading level.

Conclusions and Recommendations

Agreements and conclusions:

- The Task Force will prepare a progress report for the Technical Advisory Group's (TAG) second meeting, scheduled to be held in May 2018. The report will be drafted by the Task Force coordinator and Global ICP Unit and shared with the Task Force for review and feedback prior submitting to the TAG.
- The Task Force will hold its third meeting in fall 2018, tentatively in conjunction with the sixth Inter-Agency Coordination Group (IACG) meeting.
- All presentations, documents and other materials will be uploaded to the dedicated [Microsoft OneDrive folder](#) and to [Task Force's page](#) on the ICP website.

Annex 1: Meeting Agenda

2nd Meeting of the PPP Compilation and Computation Task Force
March 13, 2018
World Bank, 1818 H St. NW, Washington, DC
Agenda

09:00 – 09:15 **Introductory remarks**

- Task Force task list and meeting objectives, Erwin Diewert, University of British Columbia, and Marko Rissanen, Global ICP Unit, World Bank

09:15 – 10:00 **Availability of interim data and extrapolation indices**

- Status and way forward, Marko Rissanen, Global ICP Unit, World Bank

10:00 – 12:00 **Linking interim regional updates into a global comparison**

- Updates on Asia’s interim regional update and treatment of non-participating countries, Asian Development Bank
- Updates on Western Asia’s interim regional updates and treatment of non-participating countries, United Nations Economic and Social Commission for Western Asia
- Updates on Africa’s 2015/2016 data, African Development Bank
- Linking specific headings for Eurostat-OECD countries for interim years, Eurostat and OECD

12:00 – 12:30 **Productivity adjustment for government**

- Options for updating and applying productivity adjustment factors for interim years and 2017 cycle, Robert Inklaar, University of Groningen

12:30 – 14:00 **Lunch to celebrate the Golden Jubilee**

14:00 – 15:30 **Building PPP time series for the interim period**

- Update of paper “A move towards the compilation of PPPs and real expenditures on an annual basis”, Prasada Rao, University of Queensland, and Robert Inklaar, University of Groningen
- Options for determining optimal extrapolation level and indices, Yuri Dikhanov, Global ICP Unit, World Bank, and Sergey Sergeev, Statistics Austria
- Options for producing “smoothened” PPP time-series for the years between reference year comparisons, Prasada Rao, University of Queensland, and Robert Inklaar, University of Groningen

15:30 – 16:00 **Alternative options for linking regions at basic heading level, *Robert Hill, University of Graz***

16:00 – 16:30 **Conclusions and recommendations**

Annex 2: List of Participants

Task Force Members

- Erwin Diewert, University of British Columbia [Task Force Coordinator]
- Paulus Konijn, Eurostat
- Marshall Reinsdorf, International Monetary Fund
- Francette Koechlin, OECD
- Vasily Kuznetsov, ROSSTAT
- Sergey Sergeev, Statistics Austria
- Robert Hill, University of Graz
- Robert Inklaar, University of Groningen
- Prasada Rao, University of Queensland
- Marko Olavi Rissanen, World Bank
- Yuri Dikhanov, World Bank

Global ICP Unit

- Nada Hamadeh, World Bank
- Mizuki Yamanaka, World Bank
- Maurice Nsabimana, World Bank
- Inyoung Song, World Bank
- William Vigil Oliver, World Bank
- Hanan AbuShanab, World Bank

Regional Implementing Agencies

- Fessou Lawson, African Development Bank
- Gregoire Mboya Deloubassou, African Development Bank
- Rees Mpofo, African Development Bank
- Michel Mouyelo-Katoula, African Development Bank
- Kaushal Joshi, Asian Development Bank
- Valerica Accibas, Interstate Statistical Committee of the Commonwealth of Independent States
- Bruno Lana, UN Economic Commission for Latin America and the Caribbean
- Maria Paz Collinao, UN Economic Commission for Latin America and the Caribbean
- Norma Chhab-Alperin, UN Economic Commission for Latin America and the Caribbean
- Majed Skaini, UN Economic and Social Commission for Western Asia

Other Participants

- Sunil Jain, India Ministry of Statistics and Program Implementation
- Margarida Martins, International Monetary Fund
- Luigi Biggeri, University of Florence
- Alan Heston, University of Pennsylvania