

**MINUTES OF MEETING ON PPP RESEARCH AGENDA AND POVERTY PPPS**  
**MAY 26, 2016, MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)**  
**BOSTON, MASSACHUSETTS**

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**Welcome and meeting objectives**

The meeting on *PPP Research Agenda and Poverty PPPs* was held on May 26, 2016 in Boston, Massachusetts, in conjunction with the *International Comparisons of Income, Prices, and Production* conference, held on May 27-28, 2016. The main objective of the meeting was to discuss various aspects related to the International Comparison Program (ICP) research agenda and purchasing power parity (PPP) applications, as per the meeting agenda provided in Annex 1. The meeting was attended by leading experts, users, observers, and World Bank staff as listed in Annex 2.

The meeting was organized by the World Bank's Global ICP Unit and chaired by Nada Hamadeh. The Massachusetts Institute of Technology (MIT) hosted the meeting.

**UNSC decision on the ICP and preparations for the ICP 2017 comparison**

The meeting was opened by Grant Cameron, who highlighted the implications of the ICP becoming a permanent statistical undertaking, including the need to develop a balanced production process that allows for sufficient time to both produce and validate the results. Grant also highlighted the crucial role of technical experts in providing methodological and technical guidance to inform the future of the program.

Nada Hamadeh briefed the participants on the United Nations Statistical Commission (UNSC) decisions on the future of the ICP<sup>1</sup>. At the 47<sup>th</sup> Session held in March 2016, the UNSC expressed its support for the ICP to become a permanent element of the global statistical program, and recommended conducting ICP at more frequent intervals. The UNSC also commissioned 2017 to be the reference year for the next ICP comparison, and a starting point for a rolling survey approach, which has been successfully applied by Eurostat and the OECD in their regional comparison programs.

A key feature of the rolling survey approach is to distribute the price surveys over a three-year period, in order to lower the collection burden for any given year, while consumer price indices (CPIs) and other price indices are used to extrapolate price data to a reference year. The rolling survey approach would allow for estimating PPPs initially every three years, which has been the OECD practice, and eventually annually, as done by Eurostat. In order to further lower the burden on participating countries, and to enhance the quality of the produced measures, the UNSC also called for a closer alignment of ICP and CPI production processes.

In terms of the governance framework, the main governance bodies to be established are a Governing Board, Global ICP Unit at the World Bank, Inter-Agency Coordination Group, and Technical Advisory Task Force(s). The UNSC is in the process of establishing the Governing Board, which will subsequently approve Terms of References for the various governance bodies. The Inter-Agency Coordination Group held its first

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<sup>1</sup> <http://unstats.un.org/unsd/statcom/47th-session/documents/Report-on-the-47th-session-of-the-statistical-commission-E.pdf>

virtual meeting on May 9-10, 2016. Both the Governing Board and Inter-Agency Coordination Group are scheduled to hold physical meetings in the fall of 2016.

Regarding the immediate ICP 2017 comparison, it was noted that data collection would be conducted during 2016, 2017 and 2018, in order to make use of data collected during various regional interim activities in 2016, as well as for allowing some flexibility in the regional implementation schedules. The results for the 2017 comparison are expected to be published by the end of 2019. Note was also taken of the various efforts of most regions to conduct within region interim comparisons during the 2012-16 time period. Methods to incorporate results from these regional interim exercises into a global set of PPPs for 2012-2016 are also being investigated.

Meeting participants noted that the rolling survey approach entails relying on various price indices, which has not been the case in the past rounds of the ICP. Hence a careful review of the quality and availability of these indices should be conducted. Furthermore, it was noted that various country participation scenarios, such as changes in regional compositions and special participation cases, would require additional considerations.

Lastly, a brief update on the use of PPPs for poverty measurement was provided, ahead of the high-level commission on global poverty's anticipated recommendations on measuring and monitoring global poverty for the Sustainable Development Goals (SDGs).

### **PPP research agenda to inform the future**

Fred Vogel and Yuri Dikhanov presented a proposal for a PPP research agenda to inform the future of ICP. The agenda was drafted based on the findings and recommendations of the UNSC Friends of Chair group's evaluation of the 2011 ICP round<sup>2</sup>, and the analysis conducted by the Global ICP Unit, Regional Implementing Agencies, and technical experts. The overarching aim of the agenda is to support the ICP 2017 comparison and the gradual transition to the rolling survey approach, development of an approach to estimate PPP time series, and the overall improvement of quality, while maintaining comparability as much as possible.

The proposed agenda included 13 points covering the following: i) moving to a rolling survey approach; ii) linking interim regional updates into a global comparison; iii) building PPP time series for the interim period; iv) estimating sub-national PPPs using CPI information; v) improving housing estimates; vi) reviewing the construction survey approach; vii) improving estimates for government services; viii) fine-tuning the global linking procedures; ix) assessing reliability of PPPs; x) researching PPPs for international poverty lines; xi) exploring alternative sources of price data; xii) harmonizing ICP and CPI activities; and xiii) explaining PPP changes between benchmarks.

The agenda was seen as comprehensive and vital for the implementation of the 2017 comparison and beyond, and it was noted that the work on certain areas, such as PPP time series, sub-national and poverty PPPs, had already been initiated. In the case of sub-national PPPs, several countries in Asia and Africa have done significant work already, assisted by the World Bank. It was also stressed that any improvement in methodologies should be accompanied by a measure of impact on resulting PPPs, where possible.

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<sup>2</sup> <http://unstats.un.org/unsd/statcom/47th-session/documents/2016-9-FOC-group-on-evaluation-of-2011-round-of-ICP-E.pdf>

The Global ICP Unit will discuss this proposed research agenda with the Inter-Agency Coordination Group in the fall of 2016, then with the Technical Advisory Task Force, once it has been formally established by the ICP Governing Board.

### **Poverty PPPs**

Yuri Dikhanov and William Vigil-Oliver presented the on-going ICP project on poverty-specific PPPs. Building on the earlier work done by Deaton and Dupriez, the project aims at exploring the sensitivity of PPPs to the choice of expenditure weights and items, with a focus on global poverty analysis. Poverty related expenditures and item-level information were obtained from a set of 28 standardized household expenditure surveys from Sub-Saharan African countries. The project is examining first the Sub-Saharan Africa region but aims to cover other regions in the near future.

The presentation reviewed expenditures at the item level. Preliminary examinations of survey items indicate that items with high expenditure shares by poor households can in many cases be found in ICP item lists. This finding hints that, overall, ICP item lists seem to be relevant for poverty related analyses. However, it was also mentioned that few items with important expenditures shares by poor households were found to be either missing from the ICP lists or the given variety not listed. These and other findings from household expenditure surveys need to be taken into consideration in the upcoming ICP item list revisions.

On poverty PPPs based on household expenditure survey weights, an iterative scheme was employed to resolve the circularity in computing PPPs arising from the need to estimate the expenditure patterns of the poor that would go into PPP computation, who in turn were identified on the basis of PPP-based poverty line. Results were presented for different methods to identify poor households across surveys: (i) below the international poverty line and (ii) around the international poverty line, using uniform and quartic (bi-weight) kernels and three different bandwidths for each kernel shape. The method of deriving average share expenditure weights was democratic for the kernels and plutocratic for the below-the-poverty-line estimates. Overall, results indicate that differences among the various poverty PPP scenarios are insignificant when compared against each other and the ICP PPPs (i.e., PPPs obtained with National Accounts weights), which corroborated the findings of Deaton and Dupriez; however, further investigation on the behavior under different kernel forms and on the quality of item and basic-heading level input data is still needed.

### **Building the PPP time series**

Robert Inklaar presented the first results of his joint work with Prasada Rao on compiling annual PPPs. The exercise focused on estimating global PPPs for 2012 and 2013 based on the ICP 2011 results, basic heading level expenditures, COICOP-12 level CPIs and main category level national account deflators for 2011, 2012 and 2013. In addition, regional 2012 and 2013 PPPs for Eurostat and Western Asia were utilized. The approach entails extrapolating linked basic heading PPPs from 2011 with appropriate price indices, inserting regional PPPs using extrapolated linking factors, and linking regions at the aggregate level through the Country Aggregation with Redistribution (CAR) procedure.

The results of three approaches were compared: (i) a full update approach that uses all available data, (ii) a partial update approach that uses all data except the regional 2012 and 2013 PPPs, and (iii) aggregate high-level extrapolations. In addition, the quality of the extrapolation indices was assessed by comparing the aggregations of the detailed indices against the headline indices. Initial findings indicate that

extrapolation of household consumption seem to more reliable than other components of gross domestic product. In addition, several extrapolation indices were flagged for further review prior to reaching any final conclusions of the approach. It was noted that the extrapolation quality was affected by the quality and availability of CPIs and deflators.

### **Use of private sector data in PPP estimates**

Marko Rissanen presented the on-going pilot project to collect granular price data through a private sector partnership for augmenting and informing price comparisons and related applications. The pilot tests the feasibility of covering a relatively complete basket of goods and services for household consumption, as well as achieving a wide geographical coverage, through crowdsourcing, enabled by Premise's platform of paid on-the-ground citizens. The first phase of the pilot started in mid-2015 with three countries and a basket of approximate 150 household goods and services. The on-going second phase, foreseen to be conducted throughout 2016, covers 12 additional countries together with a slightly enlarged basket. In addition to price data collected, the data points include a variety of metadata including product pictures, GPS coordinates, timestamps, and outlet and brand information.

Two preliminary usage examples were provided on estimation of regional PPPs for five African countries, and sub-national PPPs for 11 Brazilian states. It was noted that the World Bank and Premise will continue to work on improving data collection procedures and practices, in order to achieve more reliable price data for a majority of the collected items. Main challenges faced to date include securing sufficient temporal and spatial data coverage for all items in the basket, and ensuring the quality and comparability of collected data.

### **Construction PPPs**

Nada Hamadeh and Marko Rissanen briefed the participants on a recent article examining the 2011 ICP results for Construction and Civil Engineering. The article claims that the ICP overestimates capital formation for low and middle-income countries. A review of the author's approach found it to be lacking, with several shortcomings. Thus, no conclusions can be drawn from this work.



## Meeting on Poverty PPPs and PPP Research Agenda

May 26, 2016  
Boston, Massachusetts  
Massachusetts Institute of Technology (MIT)

09:00 – 09:30	<b>Welcome - Coffee</b>
09:30 – 10:00	<b>1. Briefing on the UNSC decision on the future of the ICP</b>
10:00 – 11:00	<b>2. PPP research agenda to inform the future</b>
11:00 – 11:15	<b>Coffee Break</b>
11:15 – 12:30	<b>3. Poverty PPPs</b>
12:30 – 13:30	<b><i>Lunch</i></b>
13:30 – 14:30	<b>4. Building PPP time series</b>
14:30 – 15:00	<b>5. Construction PPPs</b>
15:00 – 15:15	<b>Coffee Break</b>
15:15 – 16:15	<b>6. Use of private sector data in PPP estimates</b>
16:15 - 16:30	<b>Closing Remarks</b>

## Annex 2: List of participants

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Name	Organization
Allen, Robert	New York University Abu Dhabi
Almås, Ingvild	Stockholm University, Institute for International Economic Studies
Antoniades, Alexis	Georgetown University Qatar
Aten, Bettina	Bureau of Economic Analysis
Cameron, Grant	World Bank Group
Cavallo, Alberto	Massachusetts Institute of Technology
Chen, Shaohua	World Bank Group
Deaton, Angus	Princeton University
Degefu, Tefera	World Bank Group
Diewert, Erwin	University of British Columbia
Dikhanov, Yuri	World Bank Group
Hamadeh, Nada	World Bank Group
Heston, Alan	University of Pennsylvania
Hill, Robert	University of Graz
Inklaar, Robert	University of Groningen
Rao, Prasada	University of Queensland
Redding, Stephen	Princeton University
Reinsdorf, Marshall	International Monetary Fund
Rissanen, Marko	World Bank Group
Talavera, Oleksandr	University of Sheffield
Timmer, Marcel	University of Groningen
Vigil-Oliver, William	World Bank Group
Vogel, Fred	World Bank Group
Xu, Mingzhi	University of California, Davis