6th Meeting of the ICP Inter-Agency Coordination Group

and 3rd Meeting of the ICP Task Forces

September 24-28, 2018

World Bank, 1818 H St. NW, Washington, DC

MC 10-100

Using capital city average prices in the validation of inter-regional linking factors

Using capital city average prices in the validation of inter-regional linking factors

1. The United Nations Statistical Commission (UNSC) has recommended that methodological changes should not be introduced for the ongoing 2017 International Comparison Program (ICP) cycle[1], to maintain comparability over time and to produce reliable purchasing power parity (PPP) time series. However, in order to fine-tune the methodology and guide the future of the ICP, it was agreed to set a Research Agenda[2] focusing on (i) building consistent PPP time series; (ii) improving PPP reliability and quality; (iii) addressing difficult to measure areas, such as housing; (iv) strengthening alignment between PPPs and national statistical programs; (v) advocating wider uses and applications of PPPs; and (vi) exploring innovations in technology and new sources.

2. In order to assess PPP reliability and quality, the ICP Technical Advisory Group (TAG), at its second meeting[3] in May 2018, recommended estimating inter-regional linking factors[4] based on capital-city prices, instead of national average prices, as an additional quality assurance measure.

3. Overall, it has been a goal of the ICP to collect average annual national prices for estimating PPP that are used to convert national accounts into real expenditures. However, this goal has not been achieved everywhere to the same extent. For example, Latin American and Caribbean countries have typically collected prices only in urban areas. In OECD/Eurostat and CIS countries the price collection is carried out mostly in capital cities, with correction coefficients being applied to calculate national average prices. In Africa, Asia and Western Asia, on the other hand, the price collection has been carried out mostly nationally, but not in all countries. It is also worth noting that the coverage may vary within the regions and/or countries across time. This raises the question whether the PPPs estimated through the ICP are fully comparable across countries and regions, and if not, what is the degree of incomparability. Another related question is how much the changing sampling coverage contributes to the incomparability of ICP results between ICP benchmarks. In order to answer these questions, it is useful to access and use capital city average prices, which could be considered more comparable across time and space, in the validation of ICP PPPs.

---

[1] http://pubdocs.worldbank.org/en/291671487204300879/UNSC-47-Session-UNSC-report-EN-2016.pdf.
[2] http://pubdocs.worldbank.org/en/774201507663170526/pdf/ICP-GB02-Doc-ICP-Research-Agenda.pdf.
[3] http://pubdocs.worldbank.org/en/622831534453763982/pdf/ICP-TAG02-Minutes-rev.pdf.
[4] For an overview of the current linking methodology, refer to the ICP Operational Guide, chapter 26, " Linking and Calculation of Global Results" http://pubdocs.worldbank.org/en/182441487094194756/OG-ch26.pdf.

4. Some analysis of capital city and national average prices has been done already. In general, it was found that in Asia, both in 2005[5] and 2011[6], the capital city average prices were higher than national average prices for most items, whereas in Africa[7] it was exactly the opposite. In addition, the capital to national price ratio was not uniform within individual regions, as it may vary significantly by country. It seems that infrastructure development, among other reasons, may be a major contributor to this variability.

5. It is also important to keep in mind that not all expenditure categories are equally affected by an unrepresentative sampling framework. Apart from prices of household items, which may be most affected by the sampling frame differences, the ICP is also collecting other inputs, such as prices of capital goods, government salaries, etc. Many capital goods are priced in capital cities only across countries, so the resulting average prices are more comparable across countries and regions. Furthermore, some expenditure categories are estimated indirectly using reference PPPs; the reference PPPs are price relatives based on PPPs for other categories, and not estimated directly via price collection. Thus, the additional validation measures should mostly focus on household consumption expenditure categories.

6. As capital city average prices could be considered more comparable across countries and regions than national average prices currently collected via the ICP process, it would make sense to use capital city average prices for various price validation measures. First, using capital city average prices would allow for the calculation of counterfactual inter-regional linking factors that could be used to validate the ICP inter-regional linking factors. In addition, having capital city-based inter-regional linking factors, as a counterfactual, would allow to triangulate potential problems with price level differences between regions, and address the issues of intra- and inter-regional comparability of PPPs. Finally, going forward, analyzing capital city prices would allow for better understanding of the changes in PPPs between ICP benchmarks.

---

[5] https://www.adb.org/sites/default/files/publication/29132/ppp-preliminary-report.pdf.
[6] https://www.adb.org/sites/default/files/publication/59715/2011-icp-ppps-real-expenditures.pdf.
[7] https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Household%20Consumption%20Report. pdf.