



## ICP in the Arab Region

### Which Arab countries participated in the 2017 global ICP cycle?

The Arab region is different from other regions in that the ICP annual implementation at the regional level did not stop for the interim years between the global benchmark years. ESCWA could thus compute PPPs for the years 2012 to 2016 and 2018 to 2019, which fall between the global ICP rounds of 2011 and 2017 and beyond. Throughout the years from 2011 to 2019, 12 Arab countries were participants in the ICP implementation in the Arab region. ESCWA is thus the first region to effectively establish an annual regional series of actual PPPs extending from 2011 to 2019, covering the countries which participated in the programme throughout these years.

The 12 Arab countries which participated in the 2017 global ICP cycle comprised Bahrain, Egypt, Iraq, Jordan, Kuwait, Morocco, Oman, Qatar, Saudi Arabia, the State of Palestine, the Sudan and the United Arab Emirates. Three of these 12 participated in the ICP in both the Arab and African regions, namely, Egypt, Morocco and the Sudan.

The PPP time series for the Arab region includes results for the 12 above-mentioned countries from 2014 to 2019, but for 2011 to 2013, the country composition included Yemen instead of Morocco.

### How did ESCWA construct an annual series of regional PPPs for the Arab region?

After the 2011 ICP round, ESCWA decided to compute PPPs for 2012 and 2013 instead of relying on rough estimates. This was achieved through extrapolation of prices on a quarterly basis at the item level from 2011 to 2012 and 2013. For household consumption items, extrapolation was performed using the inflation rate at the most detailed level. As for the other surveys, extrapolation involved appropriate indices for each survey, while expenditure estimates were provided by national accounts experts from each country. Results were successfully computed for 2011, 2012 and 2013.

In 2016, there was no indication of the benchmark year for the next ICP round. Therefore, ESCWA decided to conduct its own regional PPP computation round in 2016 and to follow the same successful methodology used in 2011 for the computation of PPPs for 2014 and 2015. Consequently, a full data collection round was conducted in 2016 and actual reliable PPPs were computed. PPPs for 2015 and 2014 were calculated using a combination of actual data collection and backward price retraction.

The global ICP cycle took place in 2017. ESCWA computed PPPs for that year through actual

data collected from non-household consumption special surveys and a subset of household consumption including fast-evolving technology items. This was in addition to actual data for a few basic headings related to fuel, communication, transportation and other basic headings. The remaining household consumption data were extrapolated using detailed CPI data.

After computation of the 2017 PPPs, ESCWA exerted additional efforts to produce PPPs for 2018 and 2019 on short notice to keep users up to date on changes occurring in the purchasing power of Arab currencies as well as changes in real volume measures and the real sizes of Arab economies. ESCWA computed regional PPPs for the 12 Arab countries for 2018 and 2019 by applying the same methodology while increasing actual data collection and reducing the reliability on extrapolation. The 2019 results are preliminary and subject to revision.

Over the years, ESCWA has managed to achieve a higher level of actual data collection on a regular basis. Arab countries now collect price data for all non-household consumption price surveys on an annual basis. Annual price data collection is also conducted for all fast-evolving technology items under household consumption, all items related to communication, transport and energy, and all household consumption items common to national CPI lists. This leaves only a subset of household consumption items to be extrapolated. Some countries have gone further by conducting annual actual data collection for all ICP-related surveys including the full list of household consumption items, thus foregoing any extrapolation.

The initiative taken by ESCWA to sustain the production of annual PPPs by developing such a methodology has allowed for the successful computation of annual PPPs from 2011 to 2019 and the construction of an annual time series of reliable PPPs with no gaps between benchmark years. This methodology will be carried forward to ensure continuous PPP production beyond 2019.

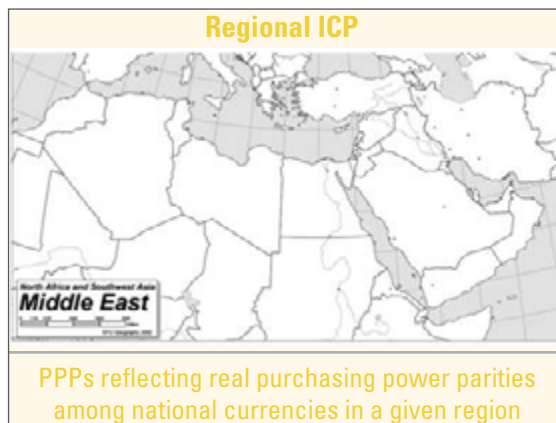
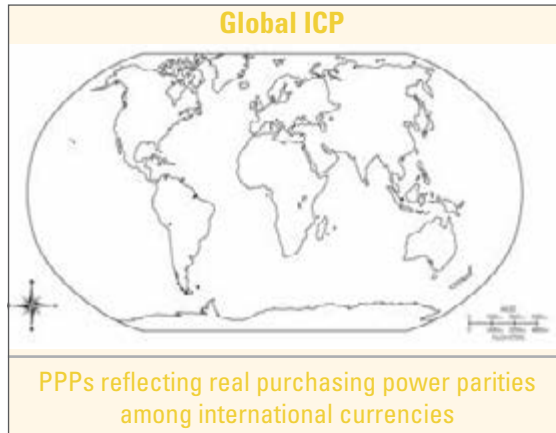
## How did the ICP help improve price statistics in the Arab region?

Aside from annual PPP production, ESCWA has developed other innovative initiatives building on the expertise and data repository generated by the ICP. Participation in the programme has also benefited countries by building statistical capacities across the entire price statistics arena.

To take the production of PPPs a step further, ESCWA developed a new initiative investing in the experience and knowledge gained in applying the PPP production methodology on a smaller scale, the country level, to produce subnational PPPs. That requires countries to have a wide geographic footprint segmented into provinces or regions with different consumption patterns and price levels leading to differences in the cost of living and individual welfare.

Subnational PPPs allow comparison of the purchasing power of the same currency between regions of the same country, the real size of the economy in different regions, and price levels in different industries among regions. ESCWA chose the United Arab Emirates as the first country in the region to pilot the computation of subnational PPPs, as it represents the best model to benefit from such a project. Its selection as a pilot country stemmed from its unique geographical structure, its federation of seven emirates and its demographic diversity, all of which lead to differences in consumption patterns and prices of goods and services. The project was successfully implemented and results computed. The same project will be implemented in Egypt and the Sudan.

Another innovative ESCWA initiative has been the computation of a subregional/regional harmonized CPI or an harmonized consumer price index (HCPI). It allows comparison of inflation across countries and estimates inflation rates for groups of countries or subregions within a region or the region as a whole. The HCPI uses unified definitions and harmonized methodologies across all participating countries. In computing



national CPI, each country might use a different methodology, a different national product list and a different reference year; CPI data thus cannot be compared among countries. The CPI is a temporal price index enabling comparison of price changes over time in the same country. The

HCPI is a special harmonized index that enables this comparison in a group of countries.

In developing the HCPI, all participating countries follow the same methodology for the production and computation of the index, making it comparable between countries. The production of this index is essentially an integration activity between the ICP and the CPI, as the CPI provides temporal price comparisons and the ICP spatial price comparisons. The HCPI thus provides a spatial comparison of temporal price changes across countries. More specifically, the CPI requires tracking of price data change for representative national items whereas the HCPI requires tracking of price data change for items, that are both representative and comparable among countries within a group.

The integration of the CPI and the ICP is thus manifested in the HCPI as it is developed building on price data previously collected for the CPI but only for a subset of the CPI list, which includes common or similar items between countries, to ensure both representativeness and comparability. As a new project, the HCPI is first being piloted by ESCWA in non-Gulf Cooperation Council (GCC) countries, with the results yet to be finalized. After that stage, the initiative will roll out to both GCC and non-GCC member countries.

ESCWA has also devised a new initiative applying the use of big data and innovative technological tools to improve data collection for price statistics in general, such as the CPI and ICP. It piloted web scraping, for instance, to collect prices for household consumption items from reputable and reliable online outlets. Web scraping was introduced as a complement to traditional data collection methods through field visits, though it is not a replacement. It automatically extracts large amounts of data from websites, with data saved to a local file or database. This offers several advantages, such as helping to acquire data from multiple sources in noticeably shorter periods of time, keeping track of any online changes in data and aiding in data archiving.

Participation in the ICP, especially with annual PPP production, has highly benefited national statistical offices. Regular regional training sessions and workshops on validating price statistics and national accounts data have built national capacities and expertise, including for the detection and treatment of outliers. Some countries have already integrated the ICP within their regular work programmes by introducing a subset of new items from the regional ICP list that are priced alongside the CPI, hence reducing future data collection efforts and costs. This integration could lead to synchronized data collection between the CPI and ICP, cutting costs, time and efforts in collecting price data for the ICP.

ESCWA has not treated the ICP as a separate programme aiming only at producing PPPs, but it has used programme activities, knowledge and expertise to improve price statistics as a whole in the Arab region. This was achieved through capacity-building and methodological enhancements, initiatives increasing statistical outputs at the national and regional levels, and the integration of the ICP with other regular price statistics programmes. Integration activities

between the ICP and CPI, therefore, reduce the burden associated with data collection required for PPP computation, and enable smooth annual PPP production.

## Lessons from the 2017 ICP cycle

Every ICP round produces more knowledge and expertise. The 2017 global cycle progressed smoothly in the Arab region given the annual PPP production strategy developed by ESCWA. Lessons from the 2017 cycle in terms of data collection and validation include:

- The importance of achieving a higher level of integration between the ICP and national statistical work programmes to build capacities, produce new price indices and increase statistical output, while reducing the burden of data collection.
- The importance of actual data collection for producing more accurate and reliable PPP results.
- Generating higher-quality data through capacity-building leads to fewer validation rounds and efforts.