

Development of Price Statistics in the Arab Region

Economic and Social Commission for Western Asia



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Majed Skaini

skaini@un.org

Economic Statistics Section

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INTRODUCTION

- The Statistics division at ESCWA has been continuously developing the area of price statistics in the Arab region through different initiatives such as the production of annual purchasing power parities (PPPs), the production of sub-national purchasing power parities and the harmonization of consumer price indices.
- Developments in the price statistics are demonstrated through:
 - The improvement of national statistical capacities by conducting several capacity building activities;
 - The enhancement of the national statistical infrastructure of member states;
 - The enlargement of the national and regional statistical output through the development of new price indices;
 - The production of accurate and high quality statistics for use in evidence-based policymaking.
- This presentation will tackle the most important activities undertaken in the region for the development of price statistics, the synergies and integration between the different indices and how they contribute towards capacity building of member states.

Annual production of purchasing power parities at the regional level



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WHAT ARE PPPs?

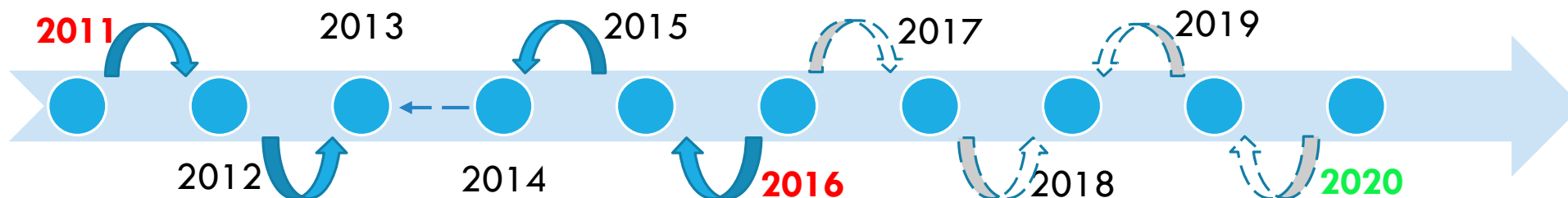
- Purchasing Power Parities (PPPs) are price relatives which allow for measuring the real worth of a country's currency relative to another by eliminating price distortions which exchange rates don't.
- Exchange Rates might over/under-estimate a national currency's value which will in turn lead to inaccurate real measurements of the country's economy and its GDP aggregates.
- The ratio of PPP over Exchange Rate shows the extent of over/under-estimation of a country's currency and this is referred to as Price Level Index (PLI).
- PPPs can be used in measuring the real size of different economies, research on poverty, monitoring SDGs, sub-national price comparisons, etc.
- PPPs are computed through International Comparison Program (ICP) rounds which usually took place every 5-6 years, while interim year PPPs were roughly estimated by the World Bank.

ANNUAL PRODUCTION OF PURCHASING POWER PARITIES (PPPs)

- The computation of PPPs requires, on one hand, the collection of prices for a comparable extensive basket of HHC and non-HHC goods and services across countries and regions and, on another hand, the estimation of national accounts expenditures at a very detailed breakdown level of GDP.
- However, due to the importance and multiple uses of PPPs, the ICP regional office at ESCWA has been exerting tremendous efforts to ensure the production of accurate annual PPPs through the development of different innovative initiatives enabling the production of actual PPPs on an annual basis.
- The commitment of the regional office to produce annual PPP time series and the commitment of ESCWA member states to participate in the different activities and projects developed by the regional office have placed Western Asia ahead of the other regions, as it became the only region – along with Eurostat-OECD – to produce PPPs on a regular basis.

ANNUAL PRODUCTION OF PURCHASING POWER PARITIES (PPPs) – CONT'D

- SD at ESCWA developed a special strategy for producing PPPs in the absence of ICP rounds.
- In 2016, ESCWA implemented a regional round for the production of PPPs which aimed at producing PPPs for three years - 2014, 2015 and 2016 - through a combination of actual data collection and retrapolation of prices for HHC and non-HHC goods and services.
- This round came after the success of a similar initiative developed by Western Asia for the production of PPPs for 2012 and 2013 through extrapolation of prices from 2011.
- Western Asia has thus successfully constructed an annual and continuous PPP time series starting from 2011 until 2016, and currently continuing to 2017 and beyond.



ANNUAL PRODUCTION OF PURCHASING POWER PARITIES (PPPs) — CONT'D

- The annual production of PPPs is in line with the UNSC recommendation to include the ICP in the regular statistical work plan.
- It also conforms with the UNSC recommendation to increase the integration and alignment of ICP with other price indices such as the Consumer Price Index (CPI) through extrapolation/ retrapolation of price data and the construction of a regional household consumption product list.
- The production of PPPs does not only improve price statistics, it also supports the production of annual national accounts expenditures at the level of the GDP and its aggregates.
- It enhances member countries' capacities in price statistics by enabling them to employ the knowledge gained through participation in the ICP to improve national CPI practices.

PRELIMINARY RESULTS — 2014-2015-2016

- Preliminary results have already been computed for 2014, 2015 and 2016 at the most detailed level – the basic heading level.
- A last revision is underway before the computation of the final results.

FUNDAMENTALS OF PURCHASING POWER PARITIES

- The global ICP unit at the World Bank has developed a new online capacity building tool – an ICP e-learning course.
- This comprehensive course provides knowledge about the International Comparison Program, Purchasing Power Parities, the components which enter in the computation of PPPs – prices and national accounts – and the computation methodology:

<https://olc.worldbank.org/content/fundamentals-purchasing-power-parities-ppps-self-paced>

The production of sub-national purchasing power parities



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THE PRODUCTION OF SUB-NATIONAL PPPs

- In an endeavor to take the production of PPPs another step further, ESCWA developed a new initiative investing the experience and knowledge gained in applying the PPP production methodology on a smaller scale – the country level – to produce sub-national PPPs.
- ESCWA chose the UAE to be the pilot country for the production of PPPs at the sub-national level given its unique federal structure of seven Emirates, the variation of consumption patterns across the country, and the difference in the prices of goods and services between Emirates.
- Sub-national PPPs for 2015 for the UAE were successfully computed, national projects are currently implemented in Egypt and Sudan for the production of sub-national PPPs as well, and other countries have also expressed interest in undertaking sub-national PPP production.

THE PRODUCTION OF SUB-NATIONAL PPPs — CONT'D

- In order to be able to compute sub-national PPPs in the UAE, ESCWA developed a comprehensive methodology tackling the different aspects of PPP production:
 - i. Development of a new national household consumption product list through the integration of the different sub-national CPI item lists.
 - ii. Development of structured product descriptions for each item to guarantee consistency and comparability in the different sub-national regions.
 - iii. Development of the global non-household consumption surveys to take into consideration national differences and ensure national representativeness.
- The UAE fully implemented household and non-household consumption surveys by conducting actual data collection.

Harmonization of consumer price indices

- *production of the HCPI*



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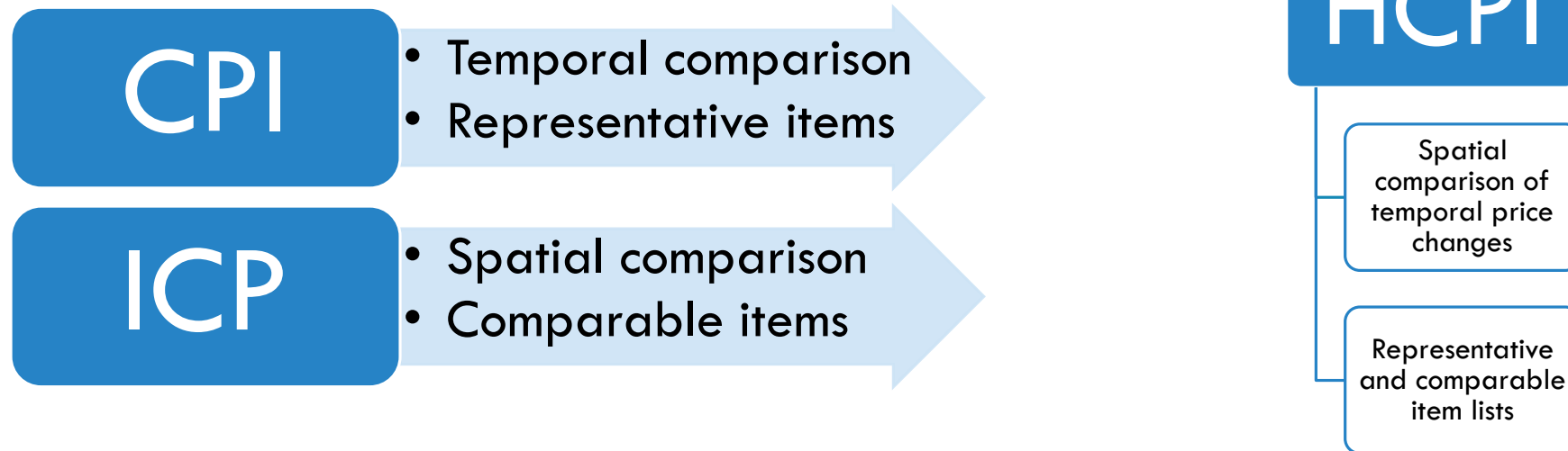
HARMONIZATION OF CONSUMER PRICE INDICES

- Consumer Price Indices (CPIs) are temporal indices measuring the change in the price level of a country's household consumption and its aggregates across time.
 - They require the collection of prices from a nationally representative basket of household consumption goods and services.
- Whereas PPPs are spatial indices providing a comparison of price levels between different countries at the same year.
 - PPP computation requires the collection of prices from a regional/global basket of comparable goods and services.

HARMONIZATION OF CONSUMER PRICE INDICES

– CONT'D

- In order to integrate the functions of both CPI and PPP and be able to measure regional/ sub-regional inflation and compare inflation levels between different member states – which cannot be accurately done using the national CPI – ESCWA developed an innovative initiative undertaken for the first time in the Arab region: the production of a Harmonized Consumer Price Index (HCPI).



HARMONIZATION OF CONSUMER PRICE INDICES

— CONT'D

- As a first stage, ESCWA chose a pilot group of member countries to implement the new index: Egypt, Iraq, Jordan, Morocco, Palestine and Sudan.
- The following steps were taken to develop the best and most efficient methodology for the computation of the index according to the region's characteristics:
 - i. Harmonized Product List: ESCWA worked on constructing a harmonized regional product list out of overlapping the national CPI lists and classifying items according to the ICP basic headings, coming up with a basket of comparable regional items yet still preserving their national representativeness.
 - ii. Computation Methodology: A comprehensive methodology was developed by ESCWA using a chained Laspeyres-type index to be used by all participating countries guaranteeing consistency and comparability.
 - iii. Base Year: A common base year was chosen – 2011 = 100
 - iv. Weights: Same year weights are used – i.e. weights are updated each year using annually disaggregated expenditures at the most detailed level estimated through the ICP work.

HARMONIZATION OF CONSUMER PRICE INDICES

— CONT'D

- The work is currently ongoing for the production and publishing of the first set of indices from 2011 to 2017.
- The work done is the cornerstone towards achieving higher overlap between national product lists on the long-term and achieving better synchronization between CPI and ICP.

Benefits of the developed initiatives at the international, regional and national levels



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USE OF PPPs IN MEASURING SDGs



Goal 1: End poverty in all its forms everywhere

PPPs are used to set the international poverty line



Goal 3: Ensure healthy lives and promote well-being for all at all ages

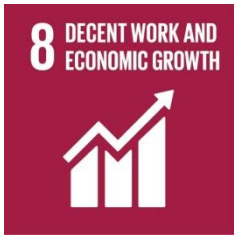
GDP at PPP is used in models to estimate maternal mortality



Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all

PPPs help quantify the global investment in research and development

USE OF PPPs IN MEASURING SDGs - CONT'D



Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Labor productivity measures are estimated using PPPs



Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Energy intensity is measured in PPP terms



Goal 10: Reduce inequality within and among countries

GDP at PPP is used to measure labor share

CAPACITY BUILDING IN PRICE STATISTICS

- Capacity building in data collection through:
 - Development of the regional ICP product list;
 - Formulation of structured product descriptions;
 - Completion of the importance matrix highlighting nationally representative items within the regional list;
 - Presentation of the framework for different surveys guiding member countries in outlet and market selection and in data collection methodology.
- Capacity building in data validation through:
 - Multiple intra-country and inter-country validation rounds for collected and extrapolated/ retrapolated household and non-household consumption price data.
- Capacity building in consumer price index computation through:
 - Training on the computation methodology for the HCPI;
 - Sharing of knowledge and best practices among member countries.

INTEGRATION IN THE FIELD OF PRICE STATISTICS

— COUNTRY EXAMPLES

- Some member countries have integrated the ICP within their regular work programs by introducing a subset of new items from the regional ICP list to be priced alongside the CPI, hence reducing data collection efforts and costs in the next ICP rounds.
- As a result, regular PPP production will be more accurate as it will rely less on extrapolation and more on actual data collection.
- This integration will lead to the synchronization of data collection activities between CPI and ICP, thus reducing cost, time, and additional efforts placed into the collection of price data for the ICP.
- ICP non-household consumption surveys also act as a foundation for countries to build on in developing their own special price indices, such as a construction price index or a machinery and equipment index.

INTEGRATION IN THE FIELD OF PRICE STATISTICS

— SUCCESS STORY: THE CASE OF PALESTINE

- Palestine benefited from its participation in the ICP for the improvement of the national statistical infrastructure through investing the capacities built and knowledge gained at the national level:
 - Merging the CPI and ICP lists into a single database composed of common items and items specific to ICP or CPI.
 - The same team conducting CPI and ICP work using the same equipment for data collection of both indicators.
 - Constructing an illustrated catalogue for national CPI guiding in item identification to ensure consistency.
 - Applying ICP data validation rules on the national CPI to improve accuracy.

CONCLUSION

- As witnessed in this presentation, the statistics division at ESCWA is always undertaking new projects and initiatives for the development of price statistics in the region.
- These projects contribute towards:
 - Building the national capacities in price statistics;
 - Improving statistical output;
 - Enhancing evidence-based policymaking;
 - Increasing the integration and harmonization between the different price indices.

Thank you

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