

# ICP COMPARISONS AND THE ROLLING PRICE SURVEY APPROACH

# INTRODUCTION

- ICP faced with a demand for more frequent comparisons
- FOC recommended that:
  - **the interval between reference years be reduced from 6 to 3 years**
  - **the ICP adopt the rolling price survey approach (RPSA) to obtain this reduction**
- UNSO endorsed both recommendations at its 47<sup>th</sup> session (March 2016)

# THE CHALLENGE

- Of the 8 ICP regions only the EU-OECD region employs RPSA
- Getting the other 7 regions to do likewise would be relatively straight forward if it were not for the 8 regions having to be combined in a global comparison
- Requires closer cooperation and coordination between regions and a stricter adherence to timetables than was required in ICP 2005 and ICP 2011
- Global, regional and national coordinators will need to agree on: how **household consumption** is to be treated; what to in the absence of suitable **temporal adjustment coefficients**; the detailed **regional and global timetables**

# BACKGROUND

- RPSA developed by EU and OECD in early 1990s with two objectives:
  - **increasing the frequency of comparisons** (at that time the period between comparisons was 5 years)
  - **reducing the response burden of participants** (who found the demand for a heavy amount of data every five years a drain on their resources)
- These were achieved through:
  - **the introduction of continuous price collection**
  - **spreading the collection of prices for a reference year over 3 years**

## BACKGROUND (contd.)

- Continuous pricing:
  - **easier for NSIs to include ICP data collections in national data collection programmes**
  - **fostered continuity of expertise in NSIs**
- Collecting prices over 3 years:
  - **Does not reduce response burden in terms of the amount of data to be collected but makes the load easier to carry**
  - **Moving from 6 to 3 year comparisons doubles the amount of data to be provided**

# RPSA

- PPPs are calculated with prices collected in the reference year  $t$  or prices collected in the year  $t-1$  or year  $t+1$
- Prices surveyed in  $t$  can be used directly in the calculation of the PPPs, but those surveyed in  $t-1$  and  $t+1$  have to be centred on  $t$  before being included in the calculation
- extrapolation or retropolation is at the basic heading level with temporal adjustment coefficients (TAC)

## RPSA (contd.)

- Price collection is cyclical with price surveys repeated every 3 years
- Products surveyed in  $t-1$  are resurveyed in  $t+2$ ;  
those surveyed in  $t$  are resurveyed in  $t+3$ ;  
those surveyed in  $t+1$  are resurveyed in  $t+4$
- The products to be priced and their specifications are updated and revised between surveys
- Products priced in  $t+2$  for example will not necessarily have the same characteristics as those priced in  $t-1$

## RPSA (contd.)

- In theory, the approach can be employed to collect prices for all types of products comprising final expenditure on GDP. In practice, it is only used to collect prices for consumer goods and services for which TACs can be extracted from the CPI
- Because of the paucity of suitable TACs, RPSA is not used to collect prices for housing services, government services and capital goods. Prices for these products are collected in the reference year or retrospectively in the following year

# DATA COLLECTION UNDER RPSA

Surveys	Year t-1	Year t	Year t+1	Year t+2	Year t+3	Year t+4
<b>Household consumption</b>						
01. Prices consumer goods and services	X→			X→		
02. Prices consumer goods and services		X			X	
03. Prices consumer goods and services			←X			←X
<b>Other surveys</b>						
04. Housing services		X			X	
05. Government services		X			X	
06. Prices capital goods		X			X	
<b>Other data</b>						
07. Temporal adjustment coefficients	X	X	X	X	X	X
08. GDP expenditure weights		X			X	
09. Annual average exchange rates		X			X	
10. Annual average resident population		X			X	

“X” prices with no year-to-year extrapolation or retropolation, “X→” prices with year-to-year extrapolation; “←X” prices with year-to-year retropolation.

# PUBLICATION OF RESULTS

- Results are PPPs, real and nominal expenditures and associated PLIs and volume indexes
- Preliminary results the reference year  $t$  are published in  $t+1$
- Intermediate results for  $t$  are published in  $t+2$
- Final results for  $t$  are published in  $t+3$ .
- Until finalised **PPPs and PLIs** can and do change. **Once finalised they do not change**
- **Real and nominal expenditures and volume indexes change before and after finalisation** as national accountants continue to refine their estimates of GDP for the reference year

# HOUSEHOLD CONSUMPTION (HFCE)

- Collecting prices for consumer products over 3 years requires HFCE to be divided into 3 equal parts with one part surveyed each year
- EU-OECD region: 6 price surveys, 2 conducted each year, one in first half of the year the other in the second half
- How should other regions split HFCE? Two possibilities:
  - **each region decides for itself the division into parts and the year in the cycle each part is to be surveyed**
  - **all regions survey the same part of HFCE in the same year**

## HFCE (contd.)

- When making the decision need to take into account of **inter-region validation of core product prices** which are validated first within regions and then between regions
- With the first possibility, each region will have its own survey cycle and the inter-region validation of core product prices may have to wait until all regions have completed their price collections. Could adversely affect the inter-region linking factors
- The second possibility avoids this. But which survey cycle should they follow? **Draw up their own schedule of surveys? Adopt the EU-OECD survey cycle which is well established?**

# TACs

- TACs (sub-indexes) are extracted from the CPI to extrapolate the PPPs of the basic headings priced in  $t-1$  (but not priced in  $t$ ) to  $t$  and to reproject the PPPs of the basic headings priced in  $t+1$  (but not priced in  $t$ ) to  $t$
- The degree to which the adjusted PPPs are close to the PPPs that would have been calculated had prices been collected in  $t$  will depend largely on the strength of the correlation between the coverage of the TAC and the coverage of the basic heading
- It is important that the correspondence between TACs and basic headings is strong.

## TACs (contd.)

- The greater the difference in coverage between the TAC and the basic heading PPPs the weaker will be the correlation between them and the accuracy of the adjusted PPPs questionable.
- The PPPs of a country depend on the data of all countries. Its PPPs can be adversely affected by errors in the price data of other participants. They can also be influenced by the suitability of the TACs employed by others.
- **Do the participating countries in the region have CPIs with the depth to provide TACs with a strong correspondence to the basic heading PPPs they are adjusting?**
- **If not, what is to be done?** An important consideration given that survey guidelines will insist on TACs being supplied

# TIMETABLES

- RPSA works in the EU-OECD region because organisers and participants have agreed a timetable which they strictly follow
- A region adopting RPSA has to make sure that all participants are reading the same page from the same book at the same time
- All regions should be doing likewise for the global comparison
- **This requires a global timetable and regional timetables that detail phases, steps and responsibilities and which dovetail with each other.**
- **The timetables should be agreed by organisers and participants together and should be adhere to rigorously. Adherence should be monitored at the global level**

# AFTERTHOUGHT

- RPSA is the means to an end. A region could choose another approach to shorten the period between comparisons
- The CIS make comparisons every three years using an approach requiring data to be collected in the reference year. It has no intention of changing to RPSA
- Other regions may wish to follow the CIS's example if they find the requirements of the rolling price survey approach difficult to meet. Their countries may find that it easier to provide data for a comparison every third year rather than every sixth year
- **Switching from six-year comparisons to three-year comparisons without changing approach could be the first step towards RPSA**