Enhancing the Comparability of the International Comparison Program 2005 and 2011 Results

Global Office

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Preface

This note is prepared to guide enhancements in the comparability of 2005 and 2011 International Comparison Program (ICP) results.

Following discussions on the 2005 results at the 7th Executive Board meeting on November 13, 2012, the Board agreed that process steps yet to be defined should be implemented, and that the results should be published together with the ICP 2011 results.
Enhancing the Comparability of the International Comparison Program

2005 and 2011 Results

1. Background

The release of the 2011 ICP results will inevitably draw comparisons with the 2005 estimates. As such, the Global Office must take steps to assist users to make effective interpretations of the 2011 results. More specifically, these steps aim to put the 2005 estimates on a similar methodological footing as the 2011 round, and to incorporate revisions in input data which have become available since the 2005 round was published.

1.1. Changes to 2005 input data

National statistical offices regularly revise their national accounts. The reasons may vary at different times but they include more complete data becoming available for recent years, a later benchmark (such as a 5-yearly population census) causing revisions to data extrapolated from the previous census benchmark when series are interpolated between these two censuses, or conceptual changes (e.g. shifting from the 1993 SNA to the 2008 SNA). As a result, revisions to ICP real expenditures may be necessary because of the revisions that countries make to their GDP estimates and population totals for the reference year after the benchmark results have been published.

A global office analysis indicates that most countries have revised their 2005 GDP figures since the ICP 2005 results were published. To conform to the conventional processes for revising similar international data series, the analysis of the changes in real expenditures from 2005 to 2011 requires ICP 2005 results to be updated to accommodate the GDP revisions. A summary of the extent of changes in 2005 GDP Expenditures, as of December 2012, is shown in the table below.

Table 1: Changes in GDP expenditures, 2005 Vs. 2011

<table>
<thead>
<tr>
<th>Range of Absolute Change</th>
<th>Number of countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 10%</td>
<td>21</td>
</tr>
<tr>
<td>Between 5% and 10%</td>
<td>23</td>
</tr>
<tr>
<td>Between 2% and 5%</td>
<td>99</td>
</tr>
<tr>
<td>No change</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>146</td>
</tr>
</tbody>
</table>

1.2. Changes to global linking and aggregation methodology

In addition, the effects of changes in the ICP methodology between 2005 and 2011, such as an improved global aggregation method or an improved global linking method, should be estimated and published to assist users to interpret the 2011 results.
The ICP 2005 round utilized the Ring comparison approach, which involved identifying 18 countries to conduct special price collections using a global product list. The 18 Ring countries consisted of about four countries per region on average, with a minimum of two countries per region. The Ring countries were then used to link up all regions. This enabled a regional comparison of PPPs at the Basic Heading level and above. ICP 2005 participants included 146 countries across six regions, though the CIS countries were linked into the Eurostat-OECD region by Russia (as a single “bridge country”) because they were not included in the ring comparison. This approach improved the quality of the price comparisons between countries within regions, but a detailed analysis of the 2005 results revealed some significant shortcomings in the ring comparison approach.

The main problem was that the “Ring” price levels for some countries were not consistent with the within region price levels, indicating problems with the selection of countries to price the Ring list. Thus, an improved approach has been recommended by the Technical Advisory Group (TAG) (and endorsed by the Executive Board) for ICP 2011. Rather than having a subset of countries pricing a large separate global list, a smaller global list, referred to as the Core list, is embedded in the regional comparisons and priced by all countries. All countries will be represented in the estimation of between region linking factors. The CIS countries will be linked into the Eurostat-OECD results using Russia as a “bridge country,” similar to the process used in the 2005 ICP. Regional PPPs based on both the Core list and regional lists are used in computing global PPPs, and regional fixity will be imposed on the globally computed PPPs. The country-approach with redistribution (CAR) is used for linking regions above the basic heading level to give priority to the fixity of volumes.

2. Guiding principles to enhance comparability

The following principles must be kept in mind when considering specific steps to facilitate comparability of 2005 and 2011 results. These principles are in line with the general framework of a broader revision policy, which is being prepared by the Global Office in consultation with the Technical Advisory Group.

Fixity: Revised 2005 estimates will ensure the fixity of the within region results.

Transparency: The revision process will be documented and made available to all users.

Time of Publication: Revised results for 2005 will be published simultaneously with 2011 results. An analysis of the effects of changes in methodology will also be published simultaneously.

3. Data revisions that enhance 2005 and 2011 comparability

Specific steps that lead to revisions in the 2005 estimates are as follows:

1. The nominal expenditures matrix at all levels from basic headings to GDP would be revised to reflect National Accounts revisions from countries. Revised estimates of GDP and main expenditure aggregates would be split into 155 basic headings.

2. Existing Global PPPs matrix at all levels from basic headings to GDP would be applied to revised nominal expenditures matrix. An underlying assumption is that the changes in expenditures
would not significantly affect the PPPs, which is considered reasonable except in cases of particularly large revisions in main aggregates. The result is a new Global matrix of real expenditures (volumes).

Following these steps enables users to directly compare the 2005 and 2011 ICP results based on consistent time series estimates of GDP.

4. Estimating the effects of changes in methodology

In addition to the data revisions described above, the Global Office proposes to produce a set of estimates that will enable users to assess the impact of major changes in methodology between the 2005 and 2011 ICP rounds. In summary, the steps involved are:

1. Re-estimate the 2005 inter-regional linking factors, at each level, using the CAR method (CAR method presumes running the unrestricted EKS on all countries, and redistributing real expenditure results with regional fixity).

2. Re-compute a new Global PPPs matrix using regional fixity and CAR linking factors (by multiplying one by another).

3. Deflate revised nominal expenditures matrix by the recomputed Global PPPs matrix (divide nominal expenditures by PPPs) to obtain the revised Global matrix of real expenditures (volumes).

4. The Global Office’s best assessment of the effects of the methodological changes in main aggregates such as Construction will be indicated in the 2011 global publication.

5. Decisions required

The Global Office requests the Executive Board to consider the following decisions:

1. In conjunction with the 2011 ICP results, the global publication will contain revised 2005 real expenditures based on each country’s 2005 revised GDP expenditures (as explained in section 4 above).

2. Analytical estimates and analysis will be published that provide the best assessment of the effects of major methodological changes between the 2005 and 2011 ICP rounds (as explained in section 5 above).