

New International Standards on Consumer Price Index

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Introduction

A new resolution on the Consumer Price Index (CPI) was adopted during the 17th International Conference of Labour Statisticians (ICLS) held during 24 November–3 December 2003 in Geneva, Switzerland. Representatives from various national statistical offices (NSOs) and major international institutions attended this high-level CPI committee to examine the draft CPI resolution presented by the International Labour Office (ILO).

The passing of the revised CPI resolution is of great significance. It represents the culmination of a long process of review, improvement and revision in the international standards on the CPI to address the concerns raised on the methodology, reliability and accuracy of the CPI. The accompanying revised CPI manual also updates the underlying concepts on the basis of theoretical and conceptual work carried out in recent years.

International Standards on CPI – Historical Background

Originally intended for use in the indexation of wages and other social welfare adjustments, the CPI has since become widely used as an indicator of inflation, as well as a macro-economic indicator for monetary and fiscal policy adjustments. As it is also used as a price deflator in the compilation

of constant price or real GDP estimates, the CPI is therefore not only an important macro-economic indicator in its own right but also has consequential impact on other important macro-economic statistics.

The ILO is the agency within the United Nations (UN) system responsible for the establishment of international standards on CPI. The recommendations in the ILO resolution on CPI constitute internationally accepted guidelines on the compilation of the CPI which serve to enhance the relevance and international comparability of CPIs compiled in different countries and economies.

The first ILO resolution on the CPI dates back to 1925 in the 2nd ICLS. Subsequent revisions were made in 1947, 1962 and 1987. Following the adoption of the 1987 resolution, a CPI manual was published in 1989 to provide detailed guidance on the operational aspects of CPI compilation. An overview of conceptual and theoretical issues relating to the CPI is also included.

Recent Developments

While the CPI has enjoyed widespread acceptance, rapid economic changes and technological developments have given rise to questions and concerns on its continuing relevance. To address these concerns, important development work on

the CPI has been carried out by NSOs and international organisations to improve and strengthen the underlying conceptual basis and the methodology for CPI compilation.

Ottawa Group

To promote development work and provide a forum for technical discussions on the conceptual issues on CPI, an international working group on price indices known as the "Ottawa Group" was established in 1994 under the auspices of the United Nations Statistical Commission. Specifically, the Ottawa Group discussed the need to adjust for quality changes and the incorporation of new products, among other influencing factors.

ECE/ILO Meetings on CPI

Once every two years, joint meetings between the Economic Commission for Europe (ECE) and ILO are also organized. These joint ECE/ILO meetings serve as a platform for price statisticians from the ECE region and member states of the ILO to discuss and exchange views on methodological developments relating to CPI.

Boskin Commission's Report

In 1995, the Boskin Commission's Report drew considerable attention and generated intense discussion, particularly in the United States. The report, commissioned by the Finance Conference of the US Senate, identified potential sources of measurement biases, and suggested that these could affect the accuracy and relevancy of the CPI. In particular, it noted that the upward bias of the CPI could have important unintended consequences, including the under-estimation of

economic growth and productivity. The report also presented a series of recommendations to improve the accuracy of price statistics.

Following these findings, countries such as Canada, United Kingdom, France and Australia carried out studies to investigate the possible upward biases in the CPI. These studies have facilitated improvements to the compilation of the CPI by many statistical agencies.

By the late 1990s, it became apparent that there was an urgency to update and revise both the 1987 resolution and the 1989 manual on CPI to better reflect current best practices and methodological advances. The NSOs, ILO and other international institutions collaborated extensively to revise the CPI manual and to draft a new CPI resolution for adoption by the international statistical community.

New International Standards on CPI

Revision of the CPI Manual

An Intersecretariat Working Group on Price Statistics (IWGPS) comprising the ILO and several major international institutions, was set up in 1998 to coordinate the efforts and expertise of the major organizations to review and revise the CPI manual and the CPI resolution.

In 2001, the Singapore Department of Statistics (DOS), together with the Organisation for Economic Co-operation and Development (OECD) jointly organized an international workshop on CPI in Singapore to review the draft chapters of the revised ILO CPI manual. That was the first time the draft manual was discussed in an international gathering comprising representatives from developing countries.

The revised manual was finally completed at the end of 2003 and is available at <http://www.ilo.org/public/english/bureau/stat/guides/cpi/index.htm>.

Revision of the Resolution on CPI

A long and arduous process of research and consultation among major international institutions and NSOs took place during the preparation of the revised draft resolution. A Meeting of Experts, chaired by the Chief Statistician of Singapore, Dr Paul Cheung, was convened in 2001 to obtain the views of the experts on the revised draft. The Meeting's recommendations were considered and subsequently incorporated in the draft resolution to be presented during the 17th ICLS.

A CPI Committee comprising participants from more than 40 countries, the ILO and other major international institutions was set up during the 17th ICLS to deliberate on the relevancy and applicability of the revised draft resolution on CPI. Discussions were focused on the conceptual and operational issues of CPI compilation, as well as the dissemination of results.

As noted by the Chairperson, Dr Paul Cheung, the revised resolution would have to stand the test of time for a fairly long period. The challenge is to "arrive at a balanced text that would be useful to the CPI compilers in countries at all levels of development and providing them with clear guidance, while leaving sufficient flexibility to take account of relevant national circumstances and CPI objectives."

Following intensive discussions by the participants, the revised resolution on CPI was amended and adopted during the Conference. Apart from amending the existing chapters of the 1987

resolution to achieve better clarity, the following new recommendations associated with several conceptual and measurement issues are also included in the 2003 resolution :

(i) *Cost of Living Index (COLI)*

With increasing interest to compile a COLI, the revised resolution provides a clear conceptual distinction between an index defined to measure the cost of living and one designed as a fixed basket price index. While the fixed basket price index measures the cost of purchasing a fixed basket of goods and services of constant quality and similar characteristics, COLI measures the effects of price changes on the cost of achieving a constant standard of living. The revised resolution recommends that a fixed basket price index or another appropriate design may be employed as an approximation to COLI.

(ii) *Construction of a Family of Indices*

As it is unlikely that a single CPI can perform equally satisfactorily for all of its applications, the revised resolution recommends the construction of a family of indices to serve different purposes. Each index should be properly defined and named and a "headline" CPI measure should be explicitly identified.

(iii) *Frequent Updating of Weights*

Updating the weights is important to ensure that the basket of goods and services remain up-to-date. The revised resolution recommends that countries update their CPI weighting pattern at least once in every five years and more frequently in periods of high inflation.

(iv) *Quality Adjustments*

To address the issue of measurement bias associated with quality changes, the revised resolution recommends that an adjustment must be made to the price of a particular product when a quality change is detected. Quality adjustment should be based on objective criteria as far as possible. While listing the various quality adjustment methods which could be applied, the resolution recognizes that some of these methods are fairly complex, costly and difficult in their implementation.

(v) *Errors in Index Construction*

Recognising the importance of the accuracy in the CPI estimates to support effective decision making by users, the revised resolution brings to attention the various sources of potential error in index construction. They include incorrect selection of products and outlets, failure to adjust correctly for quality changes as well as the use of inappropriate formulae for computing elementary aggregate and upper level indices. It recommends that adequate allocation of funding and resources should be channelled to minimize the impact of such errors in the CPI estimates.

(vi) *Elementary Aggregate Indices*

The choice of formula in the computation of elementary aggregate indices depends on the purpose of the index, the same design and the mathematical properties of the formula. The revised resolution provides a greater insight into the relative

strengths and weaknesses of the various methods. In particular, the use of geometric mean (GM) formula is highlighted.

(vii) *Classification System*

To achieve international comparability, the CPI classification should be reconciled with the UN Classification of Individual Consumption According to Purpose (COICOP), at least at the division level. However, to facilitate the analysis and interpretation of the results, it is desirable to classify goods and services according to the various supplementary classifications (for example, source of origin, durability etc). Calculation of the CPI using any classification should generate the same overall results as the original index.

The reports of the Conference would soon be available at <http://www.ilo.org/public/english/bureau/stat/techmeet/16thicls/index.htm>.

Conclusion

The adoption of the revised CPI resolution and the revision of the CPI manual updates the international guidelines and standards on the compilation of the CPI. The new standards would enhance the compilation methodology and international comparability of CPIs, while providing sufficient flexibility to facilitate their adoption by both developed and developing countries.