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**COMMON MARKET FOR EASTERN
AND SOUTHERN AFRICA (COMESA)**

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**COMESA REGULATIONS CONCERNING THE
PROCEDURES FOR THE COLLECTION OF PRICES
IN THE HARMONISED CONSUMER PRICE INDICES
(HCPI)**

THE COUNCIL OF MINISTERS OF THE COMMON MARKET OF EASTERN AND SOUTHERN AFRICA (COMESA),

Having regard to Article 140 of the Treaty establishing COMESA through which Member States made an undertaking to cooperate in the field of statistics in order to create an enabling environment for up-to-date reliable, harmonized and comparable statistical data on various sectors of economic activity, through the harmonization and adoption of common methodologies concepts and definitions to be used in collecting and compiling statistics;

Having regard to COMESA Regulations No [xx] of [date] concerning the establishment of harmonized consumer price indices (HCPIs) in Member States;

Having regard to existing COMESA Member States' legislation on statistics and the confidentiality clauses therein;

HEREBY ADOPTS THESE REGULATIONS:

**Article 1
Citation**

These Regulations shall be cited as the COMESA Regulations Concerning Price Data Validation and Editing in the Harmonized Consumer Price Indices (HCPI).

**Article 2
Definitions**

In these Regulations, unless the context otherwise requires:

"Validation of data" means the process of checking to ensure that all inputs to the HCPI calculations are correct;

"Editing of data" means the process of adjusting or eliminating erroneous inputs to the HCPI calculations;

"Outlier" means a term used to describe any extreme value in a set of data, such as a price or price relative that requires further investigation or has been verified as correct;

"Extreme outlier" means an extreme price or price change which falls outside a specified boundary;

"Ineligible price" means a price which should not be entered into the HCPI computation; and

"Reported price" means a price quotation which the price collector has submitted for inclusion in the HCPI.

**Article 3
Objective**

The objective of these Regulations is to establish a harmonized approach to the standards applied to

checking and, where appropriate, modifying the data inputs to the HCPI.

Article 4 General principles

1. Member States shall ensure that reported prices are verified before entering the HCPI.
2. Member States shall accept the reported prices when validating the prices reported for the HCPI. Member States shall reject or adjust reported prices only by reference to specific information on the individual price observations.

Article 5 Validation of reported prices

1. Reported prices shall be subject to a rigorous validation process to ensure that :
 - (a) all planned price quotations have been obtained, or, if temporarily unavailable, imputed or based on a replacement item, following the rules on item substitution in accordance with Article 12 of Regulations on Weights, Product Sample and Item Substitution;
 - (b) prices relate to items which are representative of the elementary aggregates to which they belong; and

(c) price changes compared with the previous month are within a pre-determined range of tolerance, taking into account any significant expected price changes.

2. Member States shall conduct the validation process referred to in paragraph 1 before the price collectors report the data.
3. Member States shall carry out further checks through their regional and/or central office, making use of all relevant data held as set out in the Annex.

Article 6 Editing of reported prices

1. Member States shall reject a reported price, whether or not an outlier, where it can be shown to be ineligible, or relates to an item which is not representative of its elementary aggregate.
2. Member States shall correct an incorrect price which has been validated in accordance with Article 5 where revised information is available.
3. Member States shall retain an outlier price that has not been verified before the final date required for the computation of the current monthly HCPI.
4. Member States shall impute the price by reference to the monthly price change of other

- items within the same elementary aggregate in the case of an extreme outlier.
5. In order to prevent recurrences of the cases referred to in paragraphs 3 and 4, Member States shall:
- Subject all outlier and extreme outlier prices to further investigation; and
 - Make the necessary changes to the price survey rules before the following month's survey.
- Article 7**
Data validation and editing procedures
- Member States shall choose the validation and editing procedures referred to in Articles 5 and 6 in accordance with the methods described in the Annex.
- Article 8**
Applicable Standards
- Member States shall apply the standards referred to in Articles 4 to 7 to the procedures used for establishing the HCPI.
- Article 9**
Quality Control
- Member States shall provide to the Secretariat information sufficient to evaluate compliance with the procedures laid down in Articles 4 to 7.
- Article 10**
Amendments
- Any proposals for the amendment of these Regulations shall be submitted to the Secretary General in writing who shall, within 30 days of its receipt, communicate it to the Member States.
 - The Member States which wish to comment on the proposals shall do so within 90 days from the date of the dispatch of the proposals by the Secretary General.
 - After the expiration of the period prescribed under paragraph 2, the Secretary General shall submit the proposals and any comments thereon received from the Member States to Council through the Committee on Legal Affairs.
 - Any amendment to these Regulations shall be adopted by Council and shall enter into force upon publication in the Official Gazette of the Common Market.

Article 11
Entry into force

These Regulations shall enter into force on the date of publication in the Official Gazette of the Common Market.

Done and adopted at the Thirty First Meeting of the COMESA Council of Ministers held at Kampala, Uganda, on 20 November 2012.

[Signature]
Chairperson
COMESA Council of Ministers

ANNEX - VALIDATION AND EDITING PROCEDURES FOR PRICES

1. This Annex is concerned with the methods of identifying erroneous outliers and other errors in prices and price changes, and how they should be dealt with under the terms of Articles 6 and 7 of these Regulations.
2. The methods follow the recommendations of the international CPI Manual (ILO, 2004).
3. The methods described are based on the assumption that the CPI price data in national statistical offices are held on computer databases, capable of analytical manipulation.
4. For the identification of potential errors, the prices for the latest month should be compared with the equivalent prices for the previous month, and tabulated in order of percentage change. The price comparisons may also be made on the basis of 12-month changes.
5. Such ordering shows the full range of price ratios, comparing prices of the same items, over the past month or past 12 months. Statistical theory would indicate that, in general, there will be a cluster of price ratios close to the median, with "tails" both above and below the median. The distribution will indicate which ratios appear to be so far from the median that their accuracy should be checked.
6. Pre-determined boundaries should be set, either manually or automatically, by which all price changes falling below and above such boundaries are marked as potential errors. The boundaries, known as "outlier boundaries", (e.g. plus or minus 20% differences from the median) should be considered separately for each item, depending on the degree of variation expected, based on previous data analysis.
7. Article 6(3) requires that additional outer boundaries (known as "extreme outlier boundaries") should be set. Any unexplained price falling outside the extreme outlier boundaries should be adjusted to avoid likely error in the index. The adjusted price should be imputed by calculating the average price ratio, from the previous month to the current month, of other items in the same elementary aggregate, and applying the ratio to the previous reported price of the item in question.
8. Prices failing the validity tests described should be referred back to the price collection organisation so that checks can be made in the field. Prices which have been reported incorrectly must be corrected. Those which have been confirmed should normally be retained in the database. The remainder, i.e. those prices which have been confirmed neither as correct or incorrect, should normally be retained without any form of manual or automatic adjustment.

9. All such prices must be thoroughly investigated and the reasons for their abnormality discovered. Those which turn out to have been correct, and which are likely to be repeated in the next survey, should be marked so that they are retained in future computations, even though they may again be "extreme outliers". Where it is discovered that a price was incorrect, any necessary changes to the survey rules should be made in time for the next survey, so that repetition of the problem will not occur.
10. To limit the impact of outliers, the field checks must ensure that any price which the collector has marked as unusual – for example a particular discounted price which is not in fact eligible for the HCPI [see Regulations on Temporary Price Reductions] – has been excluded from the computations.
11. It should be noted that while a price may be confirmed to have been correct and eligible for a specified item, the item may not in fact be representative of the elementary aggregate to which it belongs. If this turns out to be the case, the price should be discarded, or the item and its price moved to the correct elementary aggregate.
12. If the validation process reveals a mistake in an earlier month, the requirements of Article 11 of the Framework Regulations must be followed.