

HARMONIZATION OF THE CONSUMER PRICE INDICES IN THE EAST AFRICAN COMMUNITY PARTNER STATES (EAC)

Meeting of the Group of Experts on Consumer Price Indices

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By

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Abstract

Burundi has recently renovated a Consumer Price Indices (CPI) covering urban and rural areas throughout the country. This renewal of the CPI coincides with the East African Community (EAC) Secretariat's project to develop CPI regulations to be followed by all EAC Partner States in order to establish better quality of a harmonized CPI in the region

So, Burundi has aligned itself with the four member states in a good direction on these new harmonized indices. These five member states including Burundi had come a long way to implement the regulatory requirements within the EAC. It is also noted that Burundi and its four partner States have put in place a system to compile the preliminary harmonized monthly national CPI for the EAC region and then submit these indices to the EAC Secretariat on a monthly basis. In some cases, the finding is that the five partner states meet the requirements of the regulations. Thus, there are obstacles that prevent Member States from fully implementing all the requirements of the regulation. One of the main challenges facing the EAC Secretariat today is the lack of human resources, the structure and the lack of funds to coordinate IPC harmonization activities in the region.

Keywords: CPI, Harmonization, EAC

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List of Acronyms and Abbreviations

COICOP	Classification of Individual Consumption according to Purpose
EAs	Elementary Aggregates
EAI	Elementary Aggregate Indices
HBS	Household Budget Survey
HCPI	Harmonized Consumer Price Indices
ISTEEBU	Institut de Statistiques et d'Etudes Economiques du Burundi
KIHBS	Kenya Integrated Household Budget Survey
KNBS	Kenya National Bureau of Statistics
NAS	National Accounts Statistics
NBS	National Bureau of Statistics
NHS	National Household Survey
NISR	National Institute of Statistics of Rwanda
NSO	National Statistics Office
OCGS	Office of the Chief Government Statistician
UBOS	Uganda Bureau of Statistics
UNHS	Uganda National Household Survey
URT	United Republic of Tanzania

0. Introduction

The East African Community (EAC) Secretariat has developed CPI regulations to be followed by all the EAC Partner States to compile a better quality and Harmonized CPI within the EAC region. The five Partner States visited NSOs are in the right direction and have gone a long way to implement the requirements of the regulations.

The Partner States have set up a system to compile the national monthly preliminary Harmonized CPI for the EAC region and thereafter, submit those indices to the EAC Secretariat on a monthly basis. There are some areas where all the five Partner States have followed the requirements of the regulations. They are some of the challenges that are hindering the Partner States from fully implementing all the requirements of the regulations. One of the major challenges the EAC Secretariat is currently facing, is inadequate human resources, structure and lack of funds to coordinate the CPI Harmonization activities within the region. In addition, the following are some activities that need to be put into consideration in order to achieve the ultimate objective of the Harmonized CPI within the EAC region: Improving the design of the HBS questionnaires which is the major source of information for the Harmonized CPI; undertake a pilot study by each of the Partner State to test whether the national CPI compiled based in urban areas is statistically different from the national CPI compiled for both urban and rural areas; Organize regular training workshop for the members of the EAC HCPI Technical Working Group (TWG) on the compilation of the Harmonized CPI within the EAC regional; and Collection of consumer prices by the use of electronic devices by all the Partner States;

1. Priority on harmonization

- The preliminary indices being compiled by Partner States and submitted to EAC Secretariat are of a high quality and should be aggregated to come up with the Harmonized CPI at EAC level;
- Financial support is urgently needed to ensure that there is a permanent staff at EAC Secretariat to be specifically in charge of the Harmonized CPI for the EAC region ;
- EAC secretariat needs financial support to participate during the planning session of the HBS by Partner States to advocate for regional HCPI requirements;
- There is a need to support the EAC Partner States to adopt a fully compatible software for the compilation of the Harmonized CPI in each of the Partner States within the EAC region;
- There is a need to support EAC Partner States so that the collection of consumer prices is done electronically instead of the current practice of using paper questionnaires here is a need to support the EAC Partner States to undertake a pilot study to test whether the national CPI compiled based in urban areas is different from the national CPI compiled for both urban and rural ;
- There is urgent need for the EAC to backstop KNBS in order to ensure that the EAC regulations are followed during the rebasing of Kenya HCPI ; and

- There is urgent need to support the EAC Secretariat to fast track the process of incorporating the South Sudan CPI into the EAC HCPI.

2. Findings and recommendations on Consumer Price Index

This CPI section gives definitions for some of the technical terms before it summarizes in harmonization. It gives areas for convergence and divergence. The same chapter gives recommendations and conclusions

It gives the current practices for each of the five (5) Partner States as compared to the recommended best practices required to compile the Harmonized CPI within the EAC region. The practices include Classification of goods and services within the CPI basket, CPI Coverage (product and geographical), determination of basket and weights, product sample in the basket, selection of outlets, price collection (methodology and timing), price data validation and editing, computation of the CPI at elementary (un-weighted) and higher level (weighted), computation of derived statistics, publication and dissemination of the CPI.

a. Definitions

For the purposes of the EAC HCPI and within this report, the following definitions shall apply:

Domestic Concept: The domestic concept, as described in the International Manual on Consumer Price Indices (2004) (paragraph 4.27), refers to household consumption on the economic territory of a Partner State as including the consumption of visiting foreign households but excluding the consumption of resident households outside the territory of the Partner State.

Outlet: An outlet is a shop, market stall, service establishment, on-line supplier or other place where goods or services are sold or provided to consumers for non-business use.

Outlet-type: An outlet-type is a set of outlets which have strongly marked and readily defined similarities in terms of physical characteristics, the range of products they sell and their legal status, e.g. schools, pharmacies, hospitals, open markets etc.

Strongly seasonal products: Strongly seasonal products are products that are scarcely available and sometimes completely not available on the market during certain seasons or periods of the year. Examples are fresh fruits, fresh vegetables, products sold only during Christmas period among others

Weakly seasonal products: Weakly seasonal products are products that are available throughout the year but with regular and significant fluctuations in the quantities available or in demand and prices that are linked to the season or time of the year. Such products include dry vegetables such as beans, groundnuts, peas, etc....

Elementary aggregates: Elementary aggregates are the smallest aggregate for which expenditure data are available and used for the HCPI. An elementary aggregate represents the expenditure or consumption covered at a detailed level of stratification of the HCPI below which reliable expenditure information is not available for weighting purposes. The prices within an elementary aggregate are thus un-weighted.

Evolutionary products: Evolutionary products are products that replace models for existing varieties that continue to provide the same or similar service flows to users. Examples of evolutionary goods are new models of household appliances such as refrigerators and television sets where new models with improvements in quality are introduced on the market as new brands. They can also be supplementary products that are newly added brands of currently available products on the market such as black & white and coloured television.

Revolutionary Products: Revolutionary products are entirely new goods or services that are not closely tied to a previously available product. They tend to be products that will satisfy some long-standing need in a new way and they may not fit neatly into the existing CPI item categories. An example would be mobile phones that were introduced to replace landline phones but use a completely different technology for voice and electronic communication and also provide a variety of services. Another example is computers.

Package holiday: A package holiday consists of transport and accommodation advertised and sold together by a vendor known as a tour operator. Other services may be provided such a rental car, activities or outings during the holiday. Transport may include travel between areas as part of the holiday. Package holidays are a form of product bundling. Package holidays are organised by a tour operator and sold to a consumer by a travel agent. Some travel agents are employees of tour operators while others are independent.

Plutocratic Approach: Weights compilation method where total expenditure of the households in the reference population is used to determine the expenditure shares.

Matrix of Events: A matrix of events is qualitative information that supports the inflation numbers being compiled and disseminated. It describes the causes of price changes for both increases and decreases.

b. Summary of harmonization

i. Areas of Convergence

Compilation of the Preliminary Harmonized CPI

All the five (5) NSOs of Burundi, Kenya, Rwanda, Uganda and the United Republic of Tanzania (URT), have set up a system to compile the national monthly preliminary Harmonized CPI for the EAC region and thereafter submitted them to the EAC Secretariat. However, the URT is planning to harmonise compilation of mainland and Zanzibar CPIs to be able to produce HCPI for URT since the current preliminary Harmonized CPI submitted to the EAC Secretariat refer to only for Tanzania mainland.

Classification

The classification recommended for the compilation of the EAC HCPI and its sub-indices is the United Nations Classification of Individual Consumption According to Purpose (COICOP).

The classification of goods and services for the CPI/HCPI basket for all the six (6) Statistics offices visited namely ISTEERU (Burundi); KNBS (Kenya); NISR (Rwanda); NBS (Tanzania Main Land); OCGS (Zanzibar); and UBOS (Uganda) follow the International recommended classification of the CPI goods and services referred to as COICOP.

Approach used to compute weights for the EAs

The recommended best practice is to follow the Plutocratic approach.

While computing weights for the CPI baskets, all the six (6) Statistics offices followed the Plutocratic approach, which is the recommended best practice.

Determination of the basket and weights

The recommended best practice is to follow the domestic concept during the computation of weights.

All the six (6) Statistics offices in Burundi, Kenya, Rwanda, Tanzania main land, Uganda and Zanzibar are fully compliant with the recommended best practice of fulfilling the domestic concept while computing weights for the Harmonized CPI. This has been achieved by improving the contents of their HBS at the design stage, which is the main source of data for the CPI weights by incorporating all the required information. In addition, efforts have been taken by the NSOs to collect additional data from secondary sources to supplement the HBS results. However, the Statistics Office of Kenya will be fully compliant after carrying out the general rebasing of the national CPI, the process of which will start around July 2017.

Exclusion of illegal transaction

According to the recommended best practices, all HFMCE on illegal and black market products should be excluded during the computation of the EAC HCPI weights. Example is expenditures on prostitution.

All the six (6) Statistics offices excluded both the household final consumption expenditures of illegal transactions and prices of such products during the computation of the Harmonised CPI as recommended in the EAC Harmonized CPI regulations.

Product Coverage for special categories of goods and services

According to the recommended best practices that should be followed during the computation of weights for the EAC HCPI, the following categories of Household expenditures should be included: Legal Services, Domestic Services and Social Protection Services. Others are Package Holidays, Financial Services, Insurance Services other than life insurance, Tips & Gratuities, Seasonal Products, Second hand goods, foreign visitors non business expenditures and cross border purchases.

None of the six (6) Statistics offices covers all the recommended special category of products in the national Harmonized CPI within the EAC region. However, have improved on Special Category Products coverage such as reflected in Annex.

Compilation of lists of Seasonal Products

Lists of strongly seasonal products and that of weakly seasonal products together with their months when they are in season and when they are out of season should be readily available.

None of the six (6) NSOs from the five (5) Partner States had Compiled lists of strongly and weakly seasonal products together with their respective months when they in season and out of season.

Selection of outlets

Scientific probabilistic method of sampling is the most recommended procedure for selecting outlets within locations. However, where it is not applicable, scientific non-probabilistic method sampling is also recommended.

None of the six (6) NSOs uses probabilistic scientific methods of sampling of outlets from which consumer prices are collected. All of them use non-probabilistic method of sampling, which is also acceptable wherever scientific method of sampling is not possible.

Price Collection Period

Prices of all items in the HCPI should be collected at least once a month. Prices of items in the HCPI should be recorded during the first three weeks of the month. i.e. from 1st to 21st of each month.

All the six (6) NSOs collect consumer prices on items at least once a month and during the specified period.

Price Data Validation and Editing

Reported prices should be subjected to rigorous validation checks by making sure that all planned price quotations have been obtained.

All NSOs within the EAC region follow the recommended best practice during data validation and editing of consumer prices.

Sizes of Elementary Aggregates

Elementary aggregates should be appropriately balanced in terms of weights and should have sufficient number of items.

Except for the KNBS, which is in the process of carrying the general rebasing of her CPI, the rest of the five (5) NSOs have elementary aggregates that are balanced in terms of weights in their CPI baskets. In addition, the number of items within most of the elementary aggregates is more than one, which is the minimum requirement.

Computation of the CPI at the Elementary Level

For all collected prices of all items, the Principal of Comparing like with like must be followed during the computation of EAI. Calculations of EAI should begin with the calculations of Price Relatives. Jevons Index formula should be used during the computation of EAI. Chained monthly calculations should be used.

All NSOs in the EAC region follow the recommended best practice of computing the Harmonized CPI at the national level by using the Jevons approach and using the Chained monthly calculations.

Computation of the CPI at the Higher Level

The recommendation is to use Stepwise weighted average aggregation while computing higher-level indices.

All NSOs in the EAC region follow the recommended best practice of computing the national CPI at the higher level by using the weighted average method.

Computation of the Core CPI

The recommended approach for computation of EAC Core indices is the Exclusion Approach.

All NSOs in the EAC region compute the national core CPI by using the exclusion approach. NSOs compute the core CPI by excluding the following categories of products as a minimum: food crops, fresh milk, tobacco leaves, petrol, diesel, paraffin, gas, charcoal, firewood, electricity and both metered and un-metered water.

Evolution and Revolutionary products

All the NSOs within the EAC region should put in place a system that monitors both evolutionary and revolutionary products coming on the market. The same system should also monitor products that are getting out of the market.

None of the five (5) Partner States have fully put in place a system that monitors both evolutionary and revolutionary products coming on the market. The same system should monitor products that are getting out of the market.

Compilation of Matrix of Events

All the NSOs within the EAC region should start compiling monthly matrices of events and submit them to the EAC Secretariat at the same time of submitting the Harmonized CPI

None of the six (6) NSOs has ever compiled and submitted the matrix of events of the Harmonized CPI to the EAC Secretariat.

ii. Areas of Divergence

Geographical Coverage of Price Collection

The recommended best practice for the geographical coverage of price collection is to cover capital cities, other urban areas and rural areas.

The Statistics Office of Rwanda and Burundi collect consumer prices from their respective capital cities, urban areas and rural areas. The National NSOs in Uganda, Kenya and Tanzania (NBS and OCGS) collect consumer prices from their capital cities and other urban areas only.

Geographical Coverage of Household consumption expenditures

The recommended best practice for the geographical coverage is to include household consumption expenditures for the capital cities, other urban areas and rural areas.

The Statistics Office of Rwanda includes only household expenditures for the capital city (Kigali) and other urban areas in her Harmonized CPI basket. Likewise, the NSOs in Uganda and Kenya includes household expenditures for the capital city and other urban areas in their Harmonized CPI basket. However, statistics offices of Tanzania and Burundi include the household expenditure for the entire country i.e. expenditures for the capital city, other urban areas and rural areas.

Determination of Regional Weights

The recommended best practice is that each of Partner State should have sub-national (Regional) indices as a building block for the national indices. The weights for the regions should be obtained as their proportional household consumption expenditures.

The NSOs in Burundi, Rwanda and Uganda determined their respective CPI regional weights as a proportion of the regional household final consumption expenditures. The Statistics Office of Kenya uses proportions of regional households to determine regional CPI weights. Tanzania does have regional weights.

Mode of Price Collection

The recommended best practice is that all goods with no standard unit measurement should actually be bought, weighed and their standard unit price established.

NSOs in Uganda, Kenya and Tanzania purchase, during every month price collection, all goods with no standard units of measurements. After, purchase, the goods are weighed and their standard unit price established. The statistics office in Burundi purchase such goods once in a quarter (3 months). The statistics office in Rwanda does not purchase such goods, instead, such goods are just weighed from their stalls and their standard unit price established.

Instruments used during Prices Collection

The recommendation is that all Partner States should use electronic devices during the collection of consumer prices

All the Partner States, in principal, are still using paper questionnaires during the collection of consumer prices. However, some Partner States have started the process of shifting to electronic devices. ISTEERU is using paper questionnaire and at the same time is testing the use of electronic devices. KNBS uses paper questionnaires. NISR uses both paper questionnaires and electronic devices. However, it plans to shift to electronic devices soon. UBOS uses paper questionnaires and plans are underway to introduce electronic devices. Both the NBS and OCGS use paper questionnaires during the collection of consumer prices.

Software for Computation of the CPI

The recommendation is that Partner States should adopt a fully compatible software for the compilation of the HCPI

ISTEEBU uses CPro for capturing CPI prices and MS. Excel for the computation of the CPI. KNBS

uses MS. Excel for data entry and fox pro for the computation of the CPI. NISR uses MS. Access for both Data Entry and for the computation of the CPI but it uses Excel for the Tables. UBOS uses MS. Excel for Data Entry and for the computation of the CPI. Both NBS and OCGS use MS. Excel for both Data Entry and for the computation of the CPI

c. Recommendations

i. General recommendations

Permanent Staff at EAC Secretariat for the Harmonized CPI

The current financial status and structures at EAC secretariat cannot support a permanent staff to coordinate the Harmonization of the CPI activities within the region. Thus, there is urgent need to support the EAC Secretariat by financing a permanent staff to directly coordinate the activities of Harmonizing the CPI within the region.

Computation of the Combined Harmonized CPI for the EAC Region

The EAC Secretariat should start the process of combining the preliminary Harmonized CPI from the Partner States and produce the Harmonized CPI for the EAC region .

Preparations of Technical Guidance Notes (TGNs)

There is urgent need to support the EAC Secretariat by providing financial resources that will be utilized to prepare detailed Technical Guidance Notes that will build and sustain capacity of producing the Harmonized CPI within the EAC region .

EAC Secretariat carrying out regular audits

EAC Secretariat should be supported financially to carry out regular audits to Partner States (annually) to make sure that the quality of the Harmonized CPI is always maintained or improved on and to provide backstopping.

Sharing of HBS Survey instruments with the EAC Secretariat

In order to maximize the benefits of the Household Budget Surveys (HBS) to the CPI, there is need for the EAC secretariat to participate in the Partner States planning session of the HBS to advocate for regional HCPI requirements. Thus, Partner States should share the HBS instruments with the EAC Secretariat at the initial planning stage of the HBS .

Training of the national CPI compilers PPPs Computations.

There is urgent need to train the compilers of the national CPI in the EAC region on the detailed process of compiling the Purchasing Power Parities (PPPs). The training will be used to compile PPPs that are specific to the EAC region since they are needed for various uses.

Undertaking HBS at the same time in all Partner States

There is a need for a concerted effort to harmonize the HBSs in all the EAC Partner States such that the timing, duration, methodology, questionnaire design, etc. are all the same in all Partner States.

Instruments used during Prices Collection

All the Partner States use paper questionnaires during the collection of consumer prices. Some have started the process of shifting to electronic devices. There is urgent need to support all Partner States to fast track the process of shifting to the use of electronic devices during the collection of consumer prices.

Software for Computation of the CPI

There is Urgent need to support Partner States within the EAC region to adopt a fully compatible software for the compilation of the HCPI. Such a software should be compatible with the software used in price collection devices referred to above.

Geographical Coverage of the CPI

- There is a need to support Partner States within the EAC region to undertake a pilot study to test whether the national CPI compiled based in urban areas is different from the national CPI compiled for both urban and rural.
- There is need for URT to produce harmonised CPI that includes both Mainland and Zanzibar

ii. [Specific recommendations](#)

Determination of Regional Weights

The National Bureau of Statistics of Tanzania should start a process of having regional CPI weights .

Mode of Price Collection

The NSO in Rwanda should put in additional funds such that during price collection, all goods in the CPI basket with no standard unit of measurement are actually bought, weighed and their standard unit price established. In addition, the NSO in Burundi should buy all goods in the CPI basket with no standard unit measurement on a monthly basis instead of the current practice of buying such goods only a once in a quarter (3 months).

Product Coverage for special categories of goods and services

All Partner States should cover the recommended special category of products for the national Harmonized CPI, provided their expenditure is significant. Some of the products that should be

covered by all the Partner States are: legal services, financial services, domestic services, insurance services, social protection services, package holidays, seasonal products, second-hand goods and goods & services specifically consumed by foreign visitors and non-residents.

Compilation of lists of Seasonal Products

All Partner States should compile lists of strongly and weakly seasonal products within their CPI basket together with their respective months when they in season and out of season.

Selection of outlets

All Partner States should, **where applicable**, adopt probabilistic scientific methods of sampling of outlets from which consumer prices are collected.

Monitoring of Evolution and Revolutionary products

All the Partner States should put in place a system that monitors both evolutionary and revolutionary products coming on the market. The same system should also monitor products that are getting out of the market.

Compilation of Matrix of Events

All Partner States should start compiling monthly matrices of events and submit them to the EAC Secretariat together with the Harmonized CPI.

Domestic Concept and treatment of Seasonal & Second-hand goods

All Partner States should fully adhere to the EAC Regulation concerning the application of the domestic concept to the Harmonized Consumer Price Indices; and treatment of seasonal products and second-hand goods.

Improvement in the design of the HBS Questionnaires

There has been a great improvement by all the Partner States towards the design of the HBS questionnaires that currently cover much more products and other required information. Such standards should be maintained and more improvements should be made. UBOS is requested to expand further the current product coverage and include other variables, required for the CPI compilation, during the design of the next Uganda National Household Survey (UNHS).

Components of Core Inflation

In addition to the known products whose price are very volatile such as fresh food crops, imported and local fuel together with the administered prices for utilities (Electricity and Water), Partner States should carry out deeper analysis and identify items whose prices may seem to be very volatile and exclude such items during the computation of the Core Inflation.

Training of the national CPI compilers

There is a need for:

- regular training for the compilers of the national CPI staff within the region on CPI concepts and practicability of handling the CPI more especially on the recommended best practices.

- advanced training (Masters and Phd) for price statisticians

Submitting Harmonized National CPI to the EAC Secretariat

The National Statistics office of Burundi, Rwanda and Tanzania should submit the Harmonized national CPI of the current month to the EAC Secretariat, by the 10th of the following month.

Weights in Regional HCPI

The weight for Kenya alone for the EAC HCPI is over 40%. Thus, Kenya HCPI greatly determines the overall EAC HCPI. KNBS carried out a detailed HBS in 2015/16 and is scheduled to use this data to re-base the CPI. There is need for the EAC Secretariat to provide backstopping to Kenya National Bureau of Statistics (KNBS) during this process with a view to ascertaining compliance with the EAC HCPI regulations.

d. Conclusion

Despite the fact that none of the National Harmonized CPI fulfils all the recommended tasks to be implemented, the current monthly-harmonized CPIs from the Partner States are comparable. Hence, the Harmonized CPI for the EAC region should be computed based on the national Harmonized indices being compiled and thereafter, be disseminated to various stakeholders.