CPIs for Different Population Groups, Income Groups and Geographic Areas

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CPIs for Different Population Groups, Income Groups and Geographic Areas

- The Presentation is a study about the inflation published depending on the geographical area within the economy, where the household Final consumption expenditure is allocated either the:
  
  i. Household expenditure be allocated to the location (geographical areas) within the economy where transactions take place; or

  ii. Household expenditure be allocated to the location (geographical areas) within the economy where the households or individuals who make expenditure reside.
CPIs for Different Population Groups, Income Groups and Geographic Areas

- The study picked one Elementary Aggregate (Product) in the Uganda CPI which is second hand vehicles:
- The Uganda National CPI is compiled using data for both household expenditure (weights) and consumer prices from the urban areas;
- The CPI has 10 consumption baskets of goods and services: three baskets for population income groups and 7 baskets for geographical areas.
Three baskets for population income groups:

i. Kampala High Income Basket;

ii. Kampala Middle Income Basket; and

iii. Kampala Low Income Basket
CPIs for Different Population Groups, Income Groups and Geographic Areas

- 7 baskets for geographical areas:
  - Mbarara Basket;
  - Masaka Basket;
  - Mbale Basket;
  - Jinja Basket;
  - Gulu Basket;
  - Arua Basket; and
  - Fort Portal Basket
CPIs for Different Population Groups, Income Groups and Geographic Areas

Determination of the 10 consumption baskets.

- Uganda is demarcated into five CPI Statistical regions:
  i. Kampala Region is the capital city and its surrounding areas;
  ii. Central Region;
  iii. Northern Region;
  iv. Western Region;
  v. Eastern Region;
CPIs for Different Population Groups, Income Groups and Geographic Areas

**Determination of the 10 consumption baskets.**

1. Kampala Region is unique and treated differently.

The household final consumption expenditure for the Kampala Region is decomposed into three population income consumption baskets: Kampala High Income; Kampala Middle Income; and Kampala Low Income.
Determination of the 10 consumption baskets.

ii. Other Regions.
One consumption basket was selected for the central region;

Two consumption baskets were selected for each of the remaining three regions.
CPIs for Different Population Groups, Income Groups and Geographic Areas

Current Practice of the Uganda CPI

i. The current practice in Uganda is to allocate the household consumption expenditure to the geographical areas within the economy where the households that make such expenditure reside.

Thus, consumer prices for products that are not available in the geographical areas where the expenditure were allocated are priced from other regions where the transactions take place.
The second alternative which the study is investigating is to allocate household consumption expenditure within the economy to the geographical regions where transactions take place.

In this case, consumer prices are restricted to only those regions where the household transactions are held.
Methodology of the Study

iii. The study has picked one Elementary Aggregate (product) in the CPI which is second hand vehicles.

In the National CPI, substantial expenditure on that product was made by households from all the five regions.

However, for all the 5 regions, Kampala is the only region where transactions for second vehicles take place.
Methodology of the Study

The study proportionally re-allocated all the household expenditure on second hand vehicles from other four regions to the Kampala population income group baskets.

Thereafter, recomputed the:

i. Weights; and

ii. CPI

for each of the 10 consumption baskets.
Findings of the Weights

The results from this study show that the weights for each of the 10 consumption baskets and weights within each division of the basket changed slightly, apart from Mbarara and Kampala High Income Baskets;
### 1.1 STUDY FINDINGS - WEIGHTS - 10 CONSUMPTION BASKETS

<table>
<thead>
<tr>
<th>Consumption Basket</th>
<th>Published</th>
<th>Under Study</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kampala High Income</td>
<td>31.3977</td>
<td>31.8633</td>
<td>1.5</td>
</tr>
<tr>
<td>Kampala Middle Income</td>
<td>15.6609</td>
<td>15.7268</td>
<td>0.4</td>
</tr>
<tr>
<td>Kampala Low Income</td>
<td>10.0069</td>
<td>10.0488</td>
<td>0.4</td>
</tr>
<tr>
<td>Mbarara</td>
<td>9.6752</td>
<td>9.4189</td>
<td>-2.6</td>
</tr>
<tr>
<td>Masaka</td>
<td>9.4693</td>
<td>9.3690</td>
<td>-1.1</td>
</tr>
<tr>
<td>Mbale</td>
<td>5.6799</td>
<td>5.6298</td>
<td>-0.9</td>
</tr>
<tr>
<td>Jinja</td>
<td>5.6522</td>
<td>5.6094</td>
<td>-0.8</td>
</tr>
<tr>
<td>Gulu</td>
<td>5.0414</td>
<td>4.9966</td>
<td>-0.9</td>
</tr>
<tr>
<td>Fortportal</td>
<td>3.7608</td>
<td>3.7177</td>
<td>-1.1</td>
</tr>
<tr>
<td>Arua</td>
<td>3.6557</td>
<td>3.6197</td>
<td>-1.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1000.0000</strong></td>
<td><strong>1000.0000</strong></td>
<td></td>
</tr>
</tbody>
</table>
1.1 STUDY FINDINGS - WEIGHTS - 10 CONSUMPTION BASKETS

Graph 1: All Items CPI Weights for the 10 Consumption Baskets

<table>
<thead>
<tr>
<th>Consumption Baskets</th>
<th>Under Study</th>
<th>Published</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kampala High Income</td>
<td>31.8632</td>
<td>31.3976</td>
</tr>
<tr>
<td>Kampala Middle Income</td>
<td>15.7268</td>
<td>15.4609</td>
</tr>
<tr>
<td>Kampala Low Income</td>
<td>12.0168</td>
<td>12.0069</td>
</tr>
<tr>
<td>Mbarara</td>
<td>3.4149</td>
<td>3.4192</td>
</tr>
<tr>
<td>Masaka</td>
<td>3.3660</td>
<td>3.4593</td>
</tr>
<tr>
<td>Mbale</td>
<td>3.5098</td>
<td>3.6322</td>
</tr>
<tr>
<td>Jinja</td>
<td>3.5094</td>
<td>3.6322</td>
</tr>
<tr>
<td>Gulu</td>
<td>3.0666</td>
<td>3.1414</td>
</tr>
<tr>
<td>Fortportal</td>
<td>3.7477</td>
<td>3.7408</td>
</tr>
<tr>
<td>Arua</td>
<td>3.6387</td>
<td>3.6557</td>
</tr>
</tbody>
</table>
Findings of the Weights

However, the results at division level particularly for transport - where used vehicles are classified - indicate varying differences in weights, with Mbarara sub-region registering a substantial change from the published figures due to the relatively very large expenditure on second hand vehicles for the households of that region compared to the other regions in Uganda.
### 1.1 STUDY RESULTS – TRANSPORT WEIGHTS – 10 CONSUMPTION BASKETS

<table>
<thead>
<tr>
<th>Consumption Basket</th>
<th>Published</th>
<th>Under Study</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kampala High Income</td>
<td>6.2519</td>
<td>6.6844</td>
<td>6.9</td>
</tr>
<tr>
<td>Kampala Middle Income</td>
<td>1.7423</td>
<td>1.7900</td>
<td>2.7</td>
</tr>
<tr>
<td>Kampala Low Income</td>
<td>1.0298</td>
<td>1.0598</td>
<td>2.9</td>
</tr>
<tr>
<td>Mbarara</td>
<td>1.2410</td>
<td>0.9735</td>
<td>-21.6</td>
</tr>
<tr>
<td>Masaka</td>
<td>1.0389</td>
<td>0.9275</td>
<td>-10.7</td>
</tr>
<tr>
<td>Mbale</td>
<td>0.5145</td>
<td>0.4576</td>
<td>-11.1</td>
</tr>
<tr>
<td>Jinja</td>
<td>0.6317</td>
<td>0.5822</td>
<td>-7.8</td>
</tr>
<tr>
<td>Gulu</td>
<td>0.5214</td>
<td>0.4706</td>
<td>-9.7</td>
</tr>
<tr>
<td>Fortportal</td>
<td>0.4131</td>
<td>0.3656</td>
<td>-11.5</td>
</tr>
<tr>
<td>Arua</td>
<td>0.3945</td>
<td>0.3542</td>
<td>-10.2</td>
</tr>
</tbody>
</table>
1.1 STUDY RESULTS – TRANSPORT WEIGHTS – 10 CONSUMPTION BASKETS

Graph 2: Transport Division
Weights for the 10 Consumption Baskets
ANNUAL INFLATION
ALL ITEMS
10 CONSUMPTION BASKETS
CPIs for Different Population Groups, Income Groups and Geographic Areas

Findings of the Annual Inflation

There is no significant difference in the All Items Annual Inflation for each of the consumption baskets in both the published and these findings.
1.1 STUDY RESULTS ANNUAL INFLATION - ALL TEMS

ALL ITEMS INFLATION RATES
KAMPALA HIGH INCOME

MONTH ENDING

Published
Under study
1.1 STUDY RESULTS ANNUAL INFLATION - ALL TEMS

ALL ITEMS ANNUAL INFLATION
KAMPALA MIDDLE INCOME

MONTH ENDING

ANNUAL INFLATION RATES

Published
Under study
1.1 STUDY RESULTS ANNUAL INFLATION - ALL TEMS

ALL ITEMS ANNUAL INFLATION
KAMPALA LOW INCOME

MONTH ENDING

MONTH ENDING

ANNUAL INFLATION RATES

Published

Under study
1.1 STUDY RESULTS ANNUAL INFLATION - ALL ITEMS

ANNUAL INFLATION ALL ITEMS
MBARARA

MONTH ENDING

MONTH ENDING

ANNUAL INFLATION RATES

Published

Under study
1.1 STUDY RESULTS ANNUAL INFLATION - ALL ITEMS

ANNUAL INFLATION ALL ITEMS
MASAKA

MONTH ENDING

ANNUAL INFLATION RATES

Published

Under study
1.1 STUDY RESULTS ANNUAL INFLATION - ALL ITEMS

ANNUAL INFLATION ALL ITEMS
MBALE

MONTH ENDING

ANNUAL INFLATION RATES

Published
Under study
1.1 STUDY RESULTS ANNUAL INFLATION - ALL ITEMS

ANNUAL INFLATION ALL ITEMS
JINJA

MONTH ENDING

ANNUAL INFLATION RATES

Published
Under study
1.1 STUDY RESULTS ANNUAL INFLATION - ALL ITEMS

ANNUAL INFLATION ALL ITEMS
GULU

MONTH ENDING

ANNUAL INFLATION RATES

Published
Under study
1.1 STUDY RESULTS ANNUAL INFLATION - ALL ITEMS

ANNUAL INFLATION ALL ITEMS
ARUA

MONTH ENDING
ANNUAL INFLATION RATES

Published
Under study
1.1 STUDY RESULTS ANNUAL INFLATION - ALL ITEMS

ANNUAL INFLATION ALL ITEMS
FORT PORTAL

MONTH ENDING

ANNUAL INFLATION RATES

Published
Under study
ANNUAL INFLATION
TRANSPORT DIVISION
10 CONSUMPTION BASKETS
Findings of the Annual Inflation

However, the results for the transport division indicate varying differences in annual inflation, with Mbarara sub-region registering a substantial change from the published figures.
1.2 STUDY RESULTS ANNUAL INFLATION - TRANSPORT

ANNUAL INFLATION TRANSPORT DIVISION
KAMPALA HIGH INCOME

MONTH ENDING

ANNUAL INFLATION RATES

Published
Under study
1.2 STUDY RESULTS ANNUAL INFLATION - TRANSPORT DIVISION

ANNUAL INFLATION TRANSPORT DIVISION
KAMPALA MIDDLE INCOME

Published
Under study
1.2 STUDY RESULTS ANNUAL INFLATION - TRANSPORT

ANNUAL INFLATION TRANSPORT DIVISION
KAMPALA LOW INCOME

MONTH ENDING

ANNUAL INFLATION RATES

Published
Under study
1.2 STUDY RESULTS ANNUAL INFLATION - TRANSPORT

ANNUAL INFLATION TRANSPORT DIVISION
MASAKA

MONTH ENDING

ANNUAL INFLATION RATES

-5.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0

Published
Under study
1.2 STUDY RESULTS ANNUAL INFLATION - TRANSPORT

ANNUAL INFLATION TRANSPORT DIVISION
MBALE

MONTH ENDING

ANNUAL INFLATION RATES

-5.0
-0.0
5.0
10.0
15.0
20.0

Published
Under study
1.2 STUDY RESULTS ANNUAL INFLATION - TRANSPORT

ANNUAL INFLATION TRANSPORT DIVISION
JINJA

MONTH ENDING

ANNUAL INFLATION RATES

-5.0  0.0  5.0  10.0  15.0  20.0  25.0  30.0

Published
Under study
1.2 STUDY RESULTS ANNUAL INFLATION - TRANSPORT

ANNUAL INFLATION TRANSPORT DIVISION
GULU

MONTH ENDING

ANNUAL INFLATION RATES

-5.0
-2.5
0.0
2.5
5.0
10.0
15.0
20.0
25.0

Published
Under study
1.2 STUDY RESULTS ANNUAL INFLATION - TRANSPORT

ANNUAL INFLATION TRANSPORT DIVISION
ARUA

MONTH ENDING

ANNUAL INFLATION RATES

-10.0
-5.0
0.0
5.0
10.0
15.0
20.0
25.0

Published
Under study
1.2 STUDY RESULTS ANNUAL INFLATION - TRANSPORT

ANNUAL INFLATION TRANSPORT DIVISION
FORT PORTAL

MONTH ENDING

ANNUAL INFLATION RATES

Published
Under study
1.2 STUDY RESULTS ANNUAL INFLATION - TRANSPORT

ANNUAL INFLATION TRANSPORT DIVISION
MBARARA

MONTH ENDING

ANNUAL INFLATION RATES

-10.0
-5.0
0.0
5.0
10.0
15.0
20.0
25.0


Published
Under study
General Findings of the Study

It appears, therefore, that the differences at the division level annual inflation depend on the importance (weight) of a given item being priced.

Hence a choice has to be made between including such an item from where actual consumption takes place, or exclude the item and include it in the Capital City from where households purchase it.

These findings should help price statisticians in understanding the implication of the pricing options they employ in compiling regional (Sub-national) CPIs.
Recommendations and Conclusions

i. The conclusion from the study where the All Items Index has not changed should not be taken globally;

ii. The study should be expanded to other products that follow under the same category;
iii. Regional Economic Communities (RECs) or Sub-Regional Organizations (SROs) that compile the Harmonised Consumer Price Indices (HCPI) should ensure that all regional member countries do follow the same approach of allocating household expenditure of the consumption baskets within their economies.