

# Expenditure weights, another reason why Inflation between countries is not expected to behave in the same manner

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## Introduction

Inflation is one of the most used economic and social indicators but the general public does not have a picture of how it is really compiled hence their confusion in interpreting it." And in order to really have an informed view on it, It is important to actually look at how inflation is defined."

Let us give a brief definition of CPI: "Consumer price index (CPI)s measure changes over time in the general level of prices of goods and services that households acquire (use or pay for) for the purpose of consumption." CPIs are widely used as a macroeconomic indicator of inflation since their movements are expected to be highly correlated with those of general Inflation.

As a reminder to the CPI users about how it is calculated: "A consumer price index (CPI) is usually calculated as a weighted average of the relative price changes of the goods and services covered by the index. The weights attached to each good or service reflect their relative importance as measured by their shares in the total consumption of all households. The weight determines the impact that its price change will have on the overall index."

In Lesotho, a country that is landlocked inside South Africa, stakeholders and users of our Consumer Price Index (CPI) or Inflation rates, at times tend to doubt our figures, especially when they move in the opposite direction to the CPI figures of our only direct neighbour and biggest trading partner South Africa (SA). The assumption is that since we import (more than 50% of basket items from SA) about 60% of our inflation from them, our inflation should always move in the same direction as theirs. Is this assumption justified Lets find out.

## Objectives

This paper aims to give CPI users a brief overview of why different economies' Consumer Price Indices or Inflation rates will not behave the same way.

The specific objectives are to show users that:

- Despite the proximity of the two or more economies, their expenditure patterns can differ. A case study of fictitious price changes for Country/Economy A (Econ A), Economy/Country B (Econ B) and Economy/Province C (Econ C).
- The expenditure weights are an integral part of the inflation.
- Even if price changes are the same, the two or more economies' inflation does not always move in the same direction (up or down).

## Methods

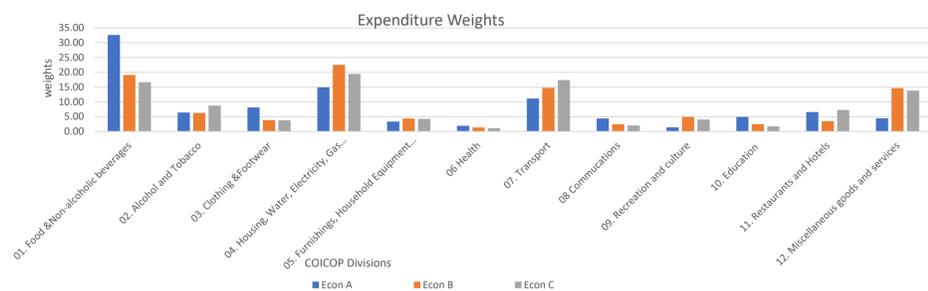


Figure 1: Expenditure weights of three economies Econ A, Econ B, and Econ C, a province of B

Table 1: Fictitious monthly price relatives across 12 COICOP Divisions for three economies

COICOP Divisions	2022 = 100	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
01. Food & Non-alcoholic beverages	100	100.5	100.7	101.4	103.1	103.7	101.0	100.0	100.0	101.0	100.0	108.0	115.0
02. Alcohol and Tobacco	100	100.4	101.8	102.6	103.0	103.2	103.4	103.8	103.8	104.1	105.0	105.5	106.5
03. Clothing & Footwear	100	100.0	100.2	100.6	100.9	101.0	95.0	98.0	101.2	101.1	101.2	105.0	105.0
04. Housing, Water, Electricity, Gas and Other Fuels	100	102.3	103.1	103.7	105.5	105.7	110.0	110.0	110.0	110.0	110.0	100.0	100.0
05. Furnishings, Household Equipment and Routine Maintenance of the House	100	100.1	100.3	101.0	102.6	103.0	103.2	103.4	103.4	103.6	103.6	103.8	103.8
06. Health	100	100.0	99.8	99.9	99.9	100.0	100.0	100.1	100.2	100.1	100.2	100.2	100.2
07. Transport	100	101.8	101.9	101.7	100.5	100.6	103.0	102.0	105.0	101.1	100.0	95.0	95.0
08. Communications	100	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
09. Recreation and culture	100	100.2	100.3	100.8	102.4	102.5	110.0	110.0	106.0	104.4	104.3	108.0	109.0
10. Education	100	105.1	105.1	100.0	100.0	100.0	105.6	106.1	106.4	106.6	106.7	100.0	100.0
11. Restaurants and Hotels	100	100.1	100.1	100.2	100.2	100.4	100.8	101.0	101.2	101.4	100.0	110.0	120.0
12. Miscellaneous goods and services	100	100.2	100.2	100.7	101.8	102.2	110.0	110.0	105.0	105.0	105.0	100.0	100.0

Let us assume that consumer baskets of the three economies were revised at the same time 2021 = 100, also across the 12 COICOP divisions the price changes for the areas are the same, it will be illustrated that due to the weights, which determine the impact that its price change will have on the overall index, the Inflation rates between these economies will not always move in the same direction (up or down).

## Results

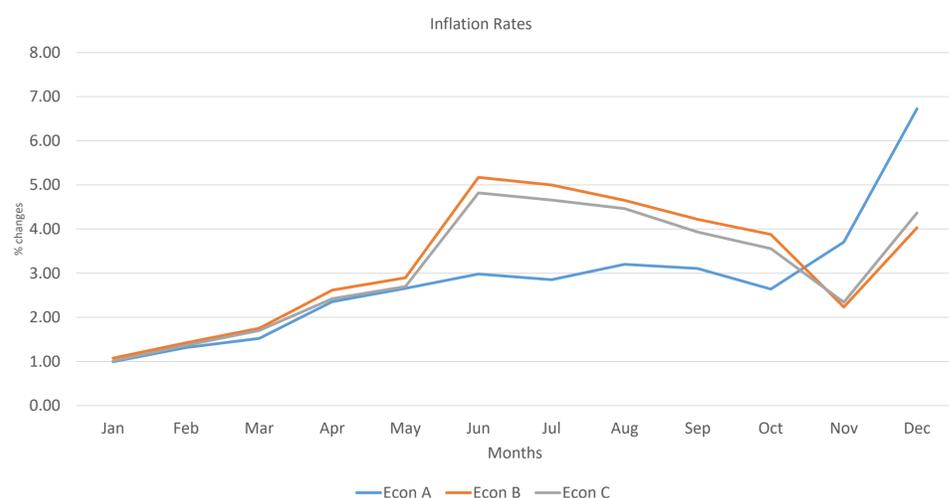


Figure 2: Fictitious Inflation rates of the three Economies

- January and February inflations are close to each other, while for March to April and May, inflations increase in a similar pattern. This is due to no drastic changes in the monthly price percentage changes as shown in Table 1 above.
- Between May and June fictitious inflation of Econ B and Econ C increased sharply while that of Econ A increased constantly.
- The fictitious inflation of Econ A kept constant from June to September before it dropped in October. While that of Econ B and Econ C started to drop at a constant rate during the same period.
- Between October and November, the inflation is moving in opposite directions, Econ A's fictitious inflation is increasing while that of Econ B and Econ C is decreasing, for the first time, Econ A's fictitious inflation is higher than that of Econ B and Econ C.
- Between November and December, for the first time, the fictitious inflation of Econ B is below that of Econ C and Econ A.

## Analysis

There are several factors that may contribute to why the Consumer Price Index or Inflation of different economies will not behave the same way. But this paper focused on the expenditure weights derived from expenditure patterns.

As depicted in Figure 1 the expenditure weights between Econ A, Econ B, and Econ C are not similar, due to this fact, even if the prices and price changes are the same as shown in Table 1 above, the Inflation as seen in figure 2 will not be the same. In a nutshell:

- The Consumer Inflation rates in January to May are close to each other and moving in the same direction since the price changes for all divisions balance each other for the three economies.
- From June to September, while price changes for most divisions with large expenditure weights for all economies increased drastically, that of food remained stable, hence the reason Econ A's Inflation remained constant and far below those of other economies.
- The reason why Econ A's fictitious Inflation from November to December surpassed those of the other two economies is due to the drastic increase in prices for products in the division (Food and Alcoholic Beverages) that takes much of Econ A's expenditure weights.
- From the results, It is apparent even if the price changes for different economies are exactly the same, inflation is not expected to move in the same direction due to the expenditure weights being different.

## Conclusion and Recommendations

In conclusion, it is clear that expenditure weights are an integral part of CPI or Inflation calculation, therefore focus should not only be placed on price changes only.

Differences in measured inflation rates between countries may be due to differences in consumption expenditures.

Users should try to understand how indicators are calculated before using them and making inferences.

CPI users should not only look at the overall inflation but all components in order to analyze the inflation.