

Understanding Kenya's Consumer Price Index (CPI): A Crucial Economic Indicator

In the realm of economic indicators, the Consumer Price Index (CPI) stands out as a vital measure of a nation's economic health and stability. This indicator, like a compass, helps guide decision-making for policymakers, businesses, and the public. We'll explore how the CPI is calculated and what it tells us about Kenya's economic well-being.

What is an Index Number?

An index number is a statistical measure used to evaluate relative changes in a variable or group of variables, such as price, quantity, or value, over time, across different geographical locations, or according to other characteristics. The index number for the base period is typically set to 100, and subsequent indices are compared to this baseline, with changes expressed as percentages. For instance, if a price index is 110 and the base period index is 100, it indicates a 10 percent rise in the general price level since the base period. Importantly, index numbers are unitless.

What is the CPI?

The Consumer Price Index (CPI) fundamentally tracks the average change over time in the prices paid by all consumers for a market basket of goods and services. This measurement is achieved by regularly re-pricing the same basket of goods and services and comparing the total cost a household would incur to purchase this basket in the current period with the cost during a selected base period. The Kenya CPI is an urban CPI, therefore the prices are tracked for a market basket of goods paid by urban households over time.

A useful way to conceptualize the CPI is to imagine a large "shopping basket" filled with goods and services that people commonly spend money on. This basket typically includes items such as food, housing, transportation, and medical care. While the contents of the CPI basket are fixed at a certain point in time, the overall price of the basket changes as the prices of the individual commodities within it fluctuate. By observing these price changes, economists can assess the rate of inflation and shifts in the cost of living.

What is Inflation Rate?

It is defined as a percentage change of the CPI between two periods. There are different inflation rates that can be computed such as year-on-year (12 months), quarterly and monthly inflation rates.

CPI versus Cost-of-Living Index.

Many users often confuse the Consumer Price Index (CPI) with a Cost-of-Living Index (COLI). However, strictly speaking, the CPI is not a COLI because it relies on a fixed basket of goods and services. The CPI is designed to measure the cost of purchasing the same basket of goods and services over different time periods, rather than what consumers buy.

In contrast, a COLI would include prices of all goods and services, even those not related to consumption. The CPI focuses on expenditures for consumption goods and services purchased for household use, excluding those bought for business or investment purposes. Additionally, the basket used for a COLI is not fixed. Although such an index would measure the general price level, it is rarely calculated in practice.

Calculating Kenya's CPI and Inflation rates

The current Kenya Urban CPI basket includes a total of 330 items, encompassing various goods and services consumed by households. The Kenya National Bureau of Statistics (KNBS) is responsible for compiling and publishing the CPI data, which involves several steps:

1. **Selecting the Basket:** A household budget survey identifies the basket of goods and services commonly consumed by urban households. This selection process considers factors such as consumption patterns, demographics, and regional variations to ensure the basket is representative.
2. **Price Collection:** Trained price collectors collect price data for the items in the basket by visiting various outlets, markets, and service providers at regular intervals, typically monthly. If an item is no longer available, guidelines are in place to determine replacement procedures.
3. **Weighting:** Each item in the basket is assigned a weight that reflects its relative importance in household spending. For instance, food expenses might have a higher weight compared to entertainment expenses.

4. **Calculating the Index:** Using the collected prices and assigned weights, the KNBS calculates the CPI using a weighted average formula. The index is expressed as a percentage relative to a base year, which serves as a reference point for comparison.
5. **Publishing the Data:** After computation, the CPI data is published regularly, offering insights into inflation trends and changes in the cost of living.

How is the basket for the CPI selected?

To construct the CPI basket, it's essential to identify the goods and services that households purchase and consume. This is accomplished through a study known as the Household Budget Survey (HBS), which countries conduct to select the CPI basket. In Kenya, several such surveys have been conducted, with the most recent being the 2015/16 Kenya Integrated Household Budget Survey (KIHBS).

The 2015/16 KIHBS gathered data on the consumption expenditure patterns of a representative sample of households. Since the CPI measures the aggregate change in retail prices for a specific basket of goods and services, the HBS provides information on Household Final Monetary Consumption Expenditures (HFMCE)—the expenditures households incur to buy goods and services for final consumption. The CPI basket is derived from the goods and services households reported purchasing for final consumption during the survey. Additionally, other data sources may also be used to determine the CPI basket.

Different Consumption Baskets in CPI

Households' consumption of goods and services is primarily influenced by their disposable income. In addition to income, factors such as tastes and preferences, lifestyle, and consumer behavior also significantly affect household consumption. As a result, different households have varying consumption baskets based on these factors. To determine these consumption baskets, data on household consumption expenditure from a Household Budget Survey (HBS) is utilized.

The consumption baskets for the current CPI in Kenya were determined using data from the 2015/16 Kenya Integrated Household Budget Survey (KIHBS). The Kenya Urban CPI includes ten consumption baskets: Nairobi Upper Income, Nairobi Middle Income, Nairobi Lower Income, Central Region, Coast Region, Eastern Region, Nyanza Region, North Eastern Region, Rift Valley Region, and Western Region. The three baskets in Nairobi (Upper Income, Middle Income, and Lower Income) are combined to form the Nairobi Combined basket, while the remaining baskets are combined to form the Rest of Urban basket. Finally, the

Nairobi Combined and Rest of Urban baskets are merged to create the Overall Kenya Urban CPI.

Selection of Outlets and Data Collection Zones for CPI

As part of the Kenya Integrated Household Budget Survey, the Bureau conducts a point of purchase survey. This survey gathers data on the types of outlets—such as open-air markets, general shops, supermarkets, kiosks, and specialized shops (e.g., butcheries, chemists, boutiques, salons, barber shops)—where households report buying goods and services for final consumption. This information helps in selecting outlets where the reference population makes a significant portion of their consumer product purchases. There are also guidelines for replacing outlets if they close or relocate before another point of purchase survey is conducted.

The CPI baskets form the basis for selecting data collection zones. At least three representative towns (zones) for each basket are chosen based on household consumption expenditures. During the rebasing of the current CPI, 50 data collection zones were selected: 14 in Nairobi City County and 36 in other urban areas. Nairobi's zones cover outlets in lower, middle, and upper-income areas. The Bureau collects around 65,000 price observations from 6,600 outlets across the 50 data collection zones.

Weights in CPI

How do you determine the importance of different of goods and services in a household? Weights for various items are determined by compiling the consumption expenditure data collected during the household budget survey. These weights represent the expenditure shares of different goods and services in the final household monetary consumption expenditure. In other words, the weights indicate the relative expenditure households allocate to an item as a proportion of the total estimated expenditure on all items.

Table 1 presents the 10 consumption baskets for the current CPI and their respective weights.

Table 1: Urban Household Final Monetary Consumption Expenditures (HFMCCE) and Percentage Shares for Nairobi Income Groups and Regional Baskets

Basket	Urban Expenditures (KSh) (FEB 2016)	Nairobi Combine d shares	Rest of Urban shares	Ratios (%)
Nairobi Lower Income	499,661,293,498.58	56.06		41.57
Nairobi Middle Income	286,998,544,651.69	32.20		
Nairobi Upper Income	104,636,870,933.59	11.74		
Central Region	230,028,798,356.27		18.36	58.43
Eastern Region	153,932,693,306.31		12.29	
Coast Region	268,340,787,529.54		21.42	
North Eastern Region	28,183,099,313.94		2.25	
Nyanza Region	154,222,471,303.93		12.31	
Western Region	57,440,216,483.66		4.58	
Rift Valley Region	360,846,084,087.57		28.80	
Total	2,144,290,859,465.08	100.00	100.00	

Interpreting the CPI

The CPI acts as a gauge for inflationary pressures within an economy. An increasing CPI indicates rising consumer prices, which reduces the purchasing power of money. Conversely, a decreasing CPI signals deflationary pressures, potentially pointing to economic downturns or weak demand.

For policymakers, CPI data guides monetary policy decisions, such as adjusting interest rates to manage inflation or stimulate economic growth. It also impacts fiscal policies related to taxation, social welfare programs, and wage adjustments.

Businesses track the CPI to anticipate shifts in consumer behavior and adjust their pricing strategies accordingly. A rising CPI may lead companies to increase prices to maintain profit margins, while a falling CPI might require price reductions to boost demand.

Individuals and households use the CPI to evaluate their financial well-being and make informed decisions about budgeting, saving, and investment. A high CPI can diminish disposable income and real earnings, lowering living standards, whereas a low CPI may indicate greater affordability and purchasing power.

Challenges and Limitations

Despite its usefulness, the CPI has limitations and challenges. One major issue is the accuracy of the basket selection and weighting, which may not fully capture the spending habits of all socioeconomic groups or account for rapidly changing consumer preferences.

Additionally, factors such as quality changes in goods and services, seasonal fluctuations, and the availability of substitutes can distort CPI readings. For example, the CPI might not accurately reflect improvements in product quality or the impact of technological advancements on prices.

In countries with volatile currencies or significant informal economies, like Kenya, accurately measuring inflation poses unique challenges. Exchange rate fluctuations, informal market dynamics, and difficulties in data collection in remote areas can affect the reliability of CPI calculations.

The last HBS was conducted eight years ago, deviating from the recommended period of five years for updating weights. While the national CPI should cover both urban and rural areas, Kenya currently covers only urban CPI. The 2015/16 KIHBS included both rural and urban populations to update the urban CPI, but constructing a rural CPI was not feasible due to cost constraints. Despite these deviations, Kenya's Urban CPI is still adequate for measuring the inflation rate for the entire country.

Conclusion

In Kenya, the Consumer Price Index serves as a critical tool for understanding inflationary trends, assessing changes in the cost of living, and guiding economic policy decisions. By providing valuable insights into consumer spending patterns and price movements, the CPI empowers policymakers, businesses, and individuals to navigate the complex economic landscape with greater clarity and confidence. However, it is essential to recognize the limitations of the CPI and continuously refine its methodologies to ensure its relevance and accuracy in an ever-changing economy.

(Subsequent articles will discuss the computation and compilation of the CPI in details)

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