

Discussion paper on the treatment of PDS items & other free social transfers in Consumer Price Index Compilation

The Ministry of Statistics & Programme Implementation (MoSPI) is in the process of revising the base of the Consumer Price Index (CPI) by updating weights and basket of CPI and introducing possible improvements in the methodology for CPI compilation. To make the index robust, resilient and effective, MoSPI proposes to seek views and suggestions of the users, experts, academicians, Government organisations, State Governments, Financial Institutions and the public at large on the "treatment of free PDS items in Consumer Price Index Compilation".

1. CPI- Introduction and Background

1.1. The **Consumer Price Index (CPI)** is designed to track changes over time in the general retail prices of a basket of goods and services **purchased** by households for consumption. This "basket" of goods and services includes items from key categories such as food and beverages, clothing, housing, education, medical care, and transportation etc. The Ministry of Statistics and Programme Implementation (MoSPI) compiles the CPI for rural, urban, and combined sectors at all-India and state/ UT level.

1.2. The CPI series for rural, urban, and combined sectors was initiated by MoSPI in 2011, using **2010** as the base year. The base year acts as a reference point, with the CPI for any given month showing how much prices have risen or fallen compared to that base year. The base year was subsequently revised to **2012**.

1.3. CPI for Rural, Urban and Combined sectors, All India Item Index for combined sector and All India and State wise Group/ Subgroup indices are released on 12th of every month at 4.00 pm. In case of holiday on 12th, it is released on the next working day. Compilation of CPI is done in adherence to International guidelines and best practices.

1.4. For compiling CPI, **Laspeyre's Index Formula** is used. This formula is based on three elements:

- i. **Base year Price:** This refers to the average price of all months in the base year.
- ii. **Base year Weights:** Derived from MoSPI's **Consumer Expenditure Surveys**. For the current series the weights were derived from the 2011-12 **Household Consumer Expenditure Survey**.
- iii. **Current Month's Price:** Prices collected each month by the Field Operations Division (FOD) of MoSPI for 299 weighted items being captured across 1181 rural markets and 1114 urban markets.

1.5. In order to keep up with the change in consumption patterns every few years, it is important to revise the base year of CPI every 3-5 years. But, it can only be done after the availability of the results of the Household Consumption Expenditure Survey which provides updated item basket and necessary weights for index compilation. After the launch of the **Household Consumption Expenditure Survey (HCES) 2022-23**, MoSPI decided to revise the CPI base year from 2012 to **2024**. The base revision exercise is under progress.

2. Usage of CPI based Inflation

2.1. Key Indicator for Monetary Policy Decisions: CPI-based inflation is a primary indicator for the Reserve Bank of India for formulating monetary policies to target inflation.

2.2. Deflator for GDP: CPI is used as a deflator to adjust nominal GDP to real GDP, which reflects the true economic growth by accounting for changes in price levels.

2.3. CPI is also used by some for indexation of wages or contracts and to adjust income tax brackets, social security payments etc.

3. Compilation of CPI

3.1. Bottom up approach is used for compilation of CPI i.e. State level indices are compiled from market level price relatives and State level indices are aggregated to arrive at All India indices. Similarly, group/ subgroup level indices are compiled by aggregating item level indices. The steps involved in compilation of CPI is given below-

3.1.1 Item level Index (Elementary Index)

Item level indices or the elementary indices are compiled for every State by using the following Jevon's Index formula which is Geometric mean of the Price relatives (current month over base year) of all the markets in a State.

$$P_{Je}^{0t} = \sqrt[m]{\prod_{i=1}^m \left(\frac{P_i^t}{P_i^0} \right)} \times 100$$

3.1.2 All India Item Index

All India item indices are compiled by calculating the weighted average of item indices with corresponding weights of items in the States.

3.1.3 State level Group/ Subgroup Indices

State level group/ subgroup indices are compiled by calculating weighted average of State level item indices with the corresponding weights of items in concerned subgroup/ group and state.

3.1.4 All India Group/ Subgroup Indices

All India Group/ Subgroup indices are compiled by calculating the weighted average of group/ subgroup indices with corresponding weights of groups/ subgroups in the States.

4. Base Revision of CPI

4.1. Base revision of CPI for revising the base year of CPI from 2012 to 2024 is under progress. Weights and item basket will be derived from Household Consumption Expenditure Survey (HCES) 2022-23.

4.2. Several modifications are being implemented in the base revision exercise to enhance the robustness and relevance of the new series. These updates aim to align with the latest technological advancements and reflect recent changes in consumption patterns.

4.3. The Base revision of CPI is a comprehensive and detailed exercise in which all the existing processes and methodology will be revisited with the objective of potential improvements. The compilation methodology along-with software will be developed afresh to incorporate requisite changes. Many improvements and enhancements are proposed in the new CPI series.

5. Issue of treatment of Free Distribution of PDS items in CPI compilation

5.1 The challenge of addressing freely distributed Public Distribution System (PDS) items in the Consumer Price Index (CPI) compilation came into focus with the implementation of a new integrated food security scheme under the **National Food Security Act (NFSA)**. Starting from January 1, 2023, the Central Government initiated this scheme to provide free food grains for one year to beneficiaries under the **Antyodaya Anna Yojana (AAY)** and **Priority Households (PHH)** categories.

5.2 There are two challenges in the free distribution of PDS items in the context of CPI compilation-

- i. **Mid-Series Adjustments:** How to address the reduction in the price of PDS items from a positive value to zero or increase in prices of PDS items from zero to some positive amount during an ongoing series?
- ii. **Inclusion in CPI basket at the start of series:** Should the free PDS items be included in the CPI basket?

5.3 Treatment in case of reduction in the price of PDS items from a positive value to zero:

5.3.1 In the existing series, in the State/UTs where free distribution scheme is implemented for all sections of the society (i.e. APL, BPL and AAY), the weights of these items are pro-rata distributed on the other items of the section (i.e. major cereals and products) within the State/UT.

5.3.2. This is one of the three methods prescribed in the *Consumer Price Index Manual: Concepts and Methods 2020 (page 35)* in case the price of social security transfers decreases from some positive amount to zero.

5.3.3. However, concerns were raised regarding the approach used to incorporate this free distribution in the CPI compilation. It was argued that the adopted method doesn't accurately capture the impact of free food grain distribution on inflation.

5.3.4 The following three methods prescribed in the *Consumer Price Index Manual: Concepts and Methods 2020 (page 35)* to deal with the cases where price of social security transfers decreases from some positive amount to zero-

Method 1: Use a zero price and adjust the weight during the next update. (Proposed for new series of CPI)

Method 2: To re-distribute the weight to the other items within the class/ section. (Adopted in the existing series)

Method 3: To re-distribute the weight broadly over all the items of the basket.

5.3.5 The next issue is free distribution of certain items in PDS for derivation of weights and their inclusion in the CPI basket of the new series of CPI.

5.4 Inclusion of freely distributed PDS items in CPI basket at the start of the series:

5.4.1 In the existing series, if an item's expenditure share is not available due to free distribution (since the out of pocket expenditure is zero), it will not have any positive weight and further the Base price and Current price for such items will also be zero. Hence such items are excluded from the item basket. This treatment of free social transfers is in line with the international best practices.

5.4.2 In this regard, the IMF's CPI Manual Concepts and Methods 2020 para 2.60 may be seen below:

"The expenditure on social transfers in kind is incurred by the governments or nonprofit institutions that pay for them, and not by the households that consume them. It could be decided that the CPI should be confined to final consumption expenditure incurred by households, in which case free social transfers in kind would be excluded from the scope of the index. Even if they were to be included, they can be ignored in practice when they are considered to be provided free, on the grounds that households incur zero expenditure on them. Of course, their prices are not zero from the perspective of the units that finance the social transfers, but the relevant prices for a CPI are those payable by the households."

5.4.3 Further, IMF's CPI Manual Concepts and Methods 2020 vide para 2.72 may also be seen below:-

"If the main reason for compiling a CPI is the measurement of inflation or as an input into monetary policy decisions, the scope of the index should be restricted to monetary transactions only, especially since non monetary transactions do not generate any demand for money..."

Keeping into consideration the definition of CPI (i.e. price change over a period of time of the goods and services purchased by the Household) and the methodology used for compiling the index as explained above, views and suggestions are invited on this issue latest by 15th January, 2025 through email psd-nso2020@mospi.gov.in
