

▶ COVID-19: Guidance for labour statistics data collection

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Consumer Prices Indexes

The COVID-19 crisis is affecting data collection activities of national statistical offices (NSOs) around the world, including for consumer price indexes (CPI).

1. Data collection in the context of COVID-1

As the pandemic continues to spread, countries struggle to collect sufficient data on consumer prices, especially for goods and services normally collected by personal visits to outlets. As with labour force surveys, countries around the world are testing different solutions to these new challenges.

Restrictions on movement led to a suspension of all personal data collection activities in most affected countries. In some cases, collection continues but is limited to price collection from outlets and markets close to price collectors' homes and only for selected products in the CPI basket. In the absence of personal data collection, many countries are increasingly using other modes of data collection, such as mailed questionnaires, telephone enquiries, web data collection, and administrative data. However, switching modes is challenging and not guaranteed to achieve the same level of coverage for a variety of reasons including:

- ▶ The complete closure of some outlets
- ▶ Low level of coverage of websites or incomplete pricing information online
- ▶ Lack of technology/internet access to allow price collectors to capture and return prices through new modes

These factors may affect the quality and timeliness of the index.

The use of scanner and internet data is not directly affected by the pandemic and provides an opportunity. However, it is not widely used by countries, and only as part of a multi-mode data collection approach,

alongside personal data collection. It will not offer a quick or complete solution to current disruptions.

To face these challenges and maintain some continuity in the CPI, NSOs should make every effort to collect a sufficient number of prices, by using all available modes of data collection, at least for the most representative or the most important products.

2. Imputation

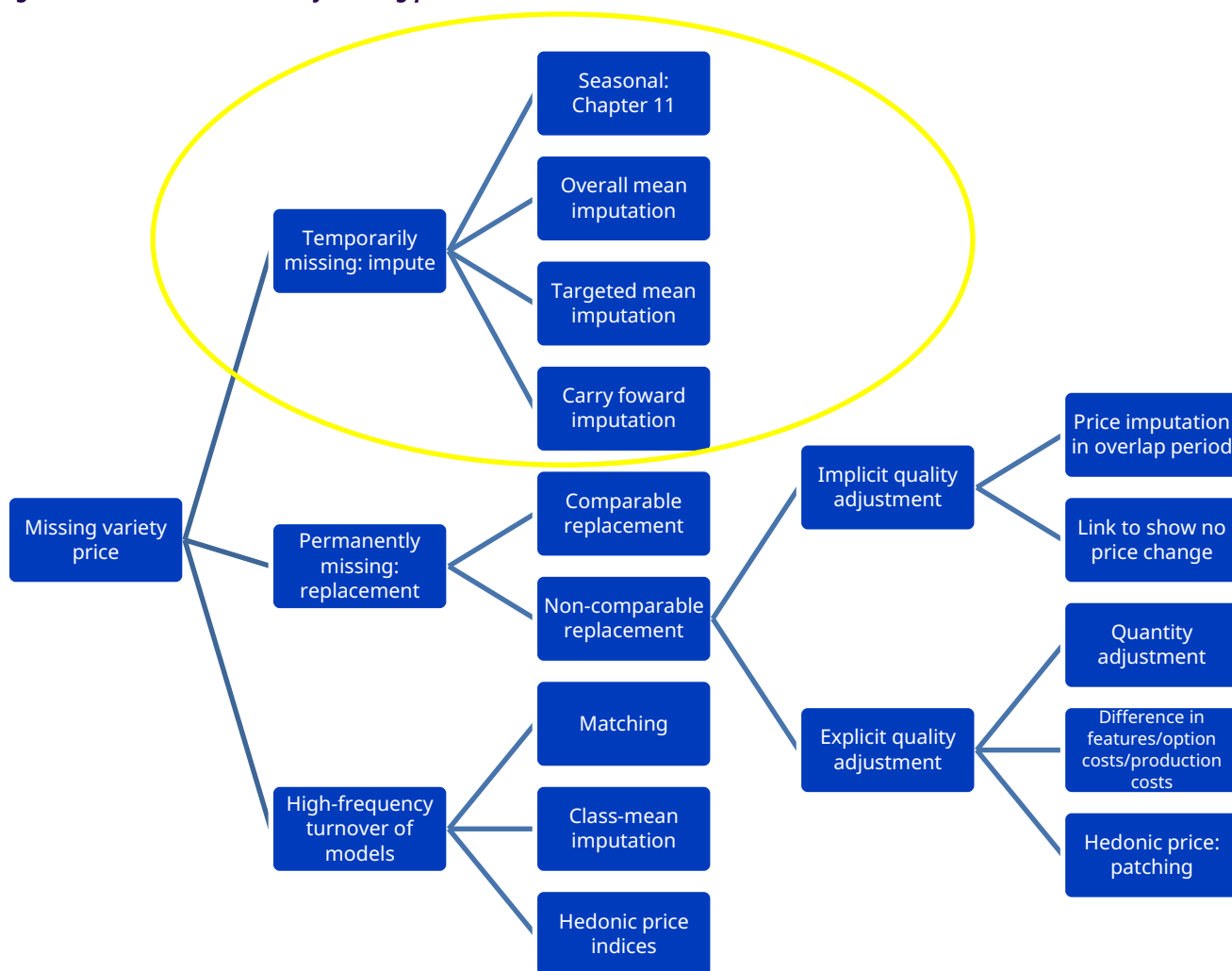
Using imputations may be required given potentially large gaps in the available prices. Along with efforts to maximise the number of prices collected, sound imputation methods can allow the CPI series to be continued with reasonable comparability over time.

The [Resolution concerning consumer price indices](#) adopted by 17th ICLS provide some guidance concerning the treatment of missing prices. The [Consumer Price Index Manual: Concepts and Methods](#), endorsed by the 51st session of the UN Statistical Commission in March 2020, provides detailed guidance on how to treat temporary missing price observations, and describes various procedures for imputations, including (see figure 1 below):

- ▶ Overall mean imputation: Imputing the missing price by the average price change for the prices that are available in the elementary aggregate. This method provides the same result as simply dropping the variety that is missing from both periods from the calculation.
- ▶ Targeted mean imputation: Imputing the missing price by the price change of an elementary aggregate or an aggregate of similar varieties that is, varieties expected to have similar short-term price changes.
- ▶ Carrying forward the last observed price.

Omitting the variety for which the price is missing is not recommended.

Figure 1. Guide to treatment of missing prices



3. Dissemination

The reduction in the number of prices collected can affect the quality and reliability of CPI estimates, especially for aggregates that are generally based on prices collected by personal visits. Therefore, when disseminating the CPI estimates, it is essential to flag indexes that are based on a significant number of imputed prices. Any aggregate indexes that fail to meet the minimum threshold for observed prices should be suppressed from publication.

Also, it is important to provide accompanying metadata regarding methods of data collection and to indicate the total number of observed and imputed prices, so that users can understand the limitations and assess the impact on estimated price changes. Any delays in the dissemination of the CPI should be communicated to the users in advance.

4. Further information

Existing international statistical standards and guidance include:

- [Resolution concerning consumer price indices](#)
- [Consumer Price Index Manual: Concepts and Methods](#)

Technical notes available on handling CPI data collection during this pandemic include:

- [Eurostat Guidance on the compilation of the HICP in the context of the COVID-19 crisis](#)
- [IMF Guidance note on CPI Index Continuity](#)
- [UNECE Brief on general challenges and recommendations](#)