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The implementation of COICOP 2018 in the HICP

An overview

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Abstract

In order to ensure comparability of the EU Harmonised Index of Consumer Prices (HICP) at international level, the HICP legal framework requires alignment of its classification with the UN COICOP. The UN Statistical Commission in 2018 adopted the COICOP 2018 as new standard. Eurostat and the EU countries are now working towards introducing COICOP 2018 in the HICP by early 2026.

The transition to COICOP 2018 requires substantial changes in methodological, operational, IT and legal aspects for all the countries participating in the HICP. The current paper provides an overview of the planned implementation as well as on the main challenges expected. These include back series compilation and the calculation of new indices for delivery fees related to online purchases.

Keywords: COICOP 2018, Harmonised Index of Consumer Prices

JEL classification : E31, C43

1. INTRODUCTION

The Classification Of Individual CONsumption by Purpose (COICOP) is an international classification managed by the United Nations Statistical Division (UNSD) and originates from 1999. A revision of the COICOP 1999 was adopted by the United Nations Statistical Division in its meeting of March 2018¹. The new COICOP 2018 updates and restructures the classification to better reflect current consumption patterns and provides more detail.

In Europe, a more detailed version of COICOP 1999 was adopted in 2016. This version, labelled “ECOICOP”, added a subclass (5-digit) level to COICOP 1999, without changing the 4-digit structure. The new COICOP 2018 also introduces a subclass (5-digit) level which in many cases is based on ECOICOP. However, COICOP 2018 also changes the division structure (into 13 divisions for consumer expenditure) and the underlying groups and classes. With these changes, COICOP 2018 is much better suited to classify current consumer expenditures (specifically on communication and information services) than COICOP 1999.

In the EU, COICOP 2018 should be introduced in the national accounts during the forthcoming benchmark revisions to be completed in 2024, following the adoption of [Regulation 2023/734](#). This paper aims to inform about the current plans for the implementation of COICOP 2018 for the purposes of the Harmonised Index of Consumer Prices (HICP). In addition, the paper highlights one particular change in COICOP 2018, related to the recording of costs of goods delivery (07.4.9.2).

2. EUROSTAT’S COICOP 2018 IMPLEMENTATION PROJECT: BACKGROUND

The aim of the COICOP 2018 implementation project for the European countries producing the HICP is to ensure the coordinated implementation of COICOP 2018 in the HICP. ECOICOP was introduced with Regulation (EU) 2016/792 of the European Parliament and of the Council. Although ECOICOP was broadly used as a source of inspiration for the revised COICOP 2018, it follows strictly the structure of COICOP 1999 and only introduces an extra level of detail. Eurostat’s implementation plan foresees the first publication of HICP data according to COICOP 2018 in February 2026.

2.1. The COICOP 2018 implementation objectives

The transition to COICOP 2018 calls for a large scale and multiannual implementation planning (the project implementation started already) that is demanding from a resource and an organizational perspective. A broad implementation plan has already been agreed with the Member States. NSIs have been consulted on their internal planning, internal resources allocation and methodological challenges, while major stakeholders (e.g., the European Central Bank and the Commission Directorate-General on Economic and Financial affairs) have been consulted on their main needs.

⁽¹⁾ It should be noted that the UN Statistical Division is still in the process of finalising the explanatory notes. This is expected to be completed in July 2023.

2.2. Scope statement

The COICOP 2018 implementation project has two major components:

- a.** The development of Eurostat's internal IT infrastructure that will appropriately serve the acceptance and validation of the countries' HICP series as well as the compilation of the EU and euro area HICP indices under the COICOP 2018 classification,
- b.** The provision of guidance, monitoring and support to the EU countries in order to be able to address all the project-related methodological and classification challenges in a harmonized and timely way.

2.3. The project aims and objectives

The project is set to meet the objectives below:

- The COICOP 2018 production system is in place by the end of 2025.
- The all-items HICP is not revised, for any month, country, or country aggregate.
- Consistency in aggregation is maintained, i.e., users should be able to reproduce the all-items HICP (and any other aggregate) from the published underlying sub-indices and their corresponding weights.
- Back series in COICOP 2018 are compiled to the lowest levels feasible (the five-digit level at least back to January 2017). Back series are available before February 2026 and cover the periods back to 1996.
- Introducing reference year 2025 at same time as COICOP 2018 (i.e., February 2026).
- Efficient processes and methodologies for the implementation are in place so that the burden on Member States and Eurostat is kept to a minimum.

2.4. Methodological challenges for the EU countries

The following methodological challenges were recorded as priorities to be treated by the EU countries with the support of Eurostat:

- Correspondence tables
- Classification issues (e.g., new items, innovative products, new case laws, translations in the national languages)
- Back series compilation
- Price collection
- Derivation of weights
- Low expenditure for a group of products.

Regarding the need for support from Eurostat, countries reported the need for a harmonization with written guidelines as well as with guidance on an ad hoc basis.

A follow-up survey on the findings of a survey conducted in 2021 will soon be launched for an update on the EU and EFTA countries' progress on the COICOP 2018 project implementation, the pending methodological challenges, and the back series' transmission possibilities.

3. IMPLEMENTATION PLAN FOR HICP

The timing of the implementation of COICOP 2018 in the HICP is linked to:

- The implementation of COICOP 2018 in the national accounts during the 2024 benchmark revisions, as the national accounts provide the basis for the HICP weights.
- The required re-referencing of the HICP to 2025 as the year of reference (following Article 5(6) of Regulation 2016/792).

The target for the HICP is to release the European aggregate indices in COICOP 2018 in February 2026, with the publication of the January 2026 index. At this time, the full time series back to 1996 should become available to the user. National accounts expenditure data for 2024 or 2025 will be the starting point for derivation of the HICP weights for 2026. Weights for earlier years will not be revised, only reallocated among sub-indices.

Countries should start submitting time series data covering the periods back to 1996 well before February 2026. It is important that by February 2026, the entire compilation, transmission, validation, and aggregation of the new series is fully checked and operational². Thus, the earlier the data transmission of back series (indices and weights) is started, the better. It is proposed that the back series data should be submitted at the latest by end June 2025.

The existing HICP data compilation and transmission in ECOICOP should be continued by all countries up to the index for December 2025 in January 2026.

Indices and weights in COICOP 2018 will be published by Eurostat in a new set of tables in the public dissemination database (starting from reference year 1996). The new set of tables will provide indices and weights under COICOP 2018 using as a reference year both 2015=100 as well as 2025=100 (the reference year as of February 2026).

The data in ECOICOP in the existing tables will be frozen after the last release for December 2025 but will remain accessible to users. These data will not be re-referenced to 2025=100.

If countries agree, the national back series data in the new tables can already be published by Eurostat between June 2025 and February 2026. Users would thus be able to get used to the new classification ahead of time. In addition, the HICP data in COICOP 2018 for the years 2022, 2023 and 2024 will likely be needed by the Purchasing Power Parities (PPP) program in October 2025 for the purpose of the first PPP calculations in the new classification (to be published in December 2025).

Countries currently have different levels of detail in their back series. This applies specifically to the 5-digit sub-indices of ECOICOP, but also for 3-digit and 4-digit sub-indices for some countries. Countries should, as a minimum, produce sub-indices in COICOP 2018 at the same level of detail as they currently produce in ECOICOP. Following this, the calculation of special aggregates will continue to be based on 4-digit indices up to December 2016 (included) and 5-digit indices thereafter. The same principle applies to the HICP-CT and HICP-AP.

⁽²⁾ The procedures could be tested by volunteer countries.

4. DELIVERY FEES

The treatment of delivery fees in the HICP will significantly change with the implementation of the COICOP 2018. There are two innovations in COICOP 2018 in relation to delivery fees:

- Delivery fees for online purchases of goods are separated from the corresponding goods and recorded in COICOP division 07, under: 07.4.1.2 ‘Courier and parcel delivery services (S)’.
- A new category, 07.4.9.2 ‘Delivery of goods (S)’, has been created to capture separately charged delivery services of goods, such as furniture and supermarket shopping, local delivery of purchased items, such as take-out meals and prescription drugs, and delivery services made immediately after the item is purchased or within a short time after the purchase.

4.1. Index compilation for the ‘Courier and parcel delivery services’ – 07.4.1.2

The current situation

Currently there are three different situations regarding the coverage of delivery fees by the European countries:

- Some countries do not do cover online shopping in their HICP because it is not representative, thus delivery fees for online shopping will also not be representative.
- Other countries are already covering online shopping however do not collect the delivery fees. For different reasons those fees are currently ignored.
- Finally, there are countries which cover online shopping and their respective delivery fees.

While for the moment the price of the delivery fee is to be added to the price of the product purchased, in the future, these two prices will be taken as different individual charges (i.e. product price and delivery service fee) in distinct COICOP codes.

Sampling

To include a product in the HICP, a sample of outlets and products must be drawn. The sample for delivery fees should be consistent with the sample of the products and outlets those fees refer to. However, it may not be necessary to collect the delivery fees for all sampled individual products, a sub-sample of those may be sufficient. The sample for this subclass will be drawn from purchases that include a delivery fee.

The delivery fees are collected at the online shop that sells the product since this is the price that consumers actually pay. The price that the delivery company charges to the online shop is out of the HICP scope.

It is also relevant for HICP purposes who delivers the product, e.g., it might be delivered by a van belonging to the shop or belonging to a delivery company. In the case the product is delivered by the online shop itself it is classified in 07.4.9.2 ‘Delivery of goods’.

Product descriptions

Product descriptions for delivery fees for online purchases should include the individual product description the delivery refers to; shop, product, variety, quantity, etc. and in addition the delivery speed, location (e.g., region, city, etc.) and the place (e.g., inside the house, at the building door, pick up) of the delivery. These specifications of the delivery fees may vary.

Delivery fees can have a differentiation between strata-delineating characteristics, which will guide the replacements, and price determining characteristics to assist the quality adjustments. The strata-delineating characteristics are the outlet and the product while the price determining characteristics are the variety, quantity, delivery speed and place, when applicable.

Price data

Delivery fees can be prices that vary according to some specifications, can be fixed prices, or can be for free under certain conditions. Purchases of multiple products (a pack) can be one product description in cases where products are often bought together, for example a towel set (bath and hand towel). This pack can be an individual product description and its delivery fees be considered under this COICOP code. Prices may also vary according to the location where the delivery will be done. Delivery prices vary also according to the location of the delivery.

4.2. Index compilation for the ‘Delivery of goods’ – 07.4.9.2

This COICOP 2018 code refers to delivery fees of goods such as meals, medicines, furniture and supermarket items, when not delivered by parcel delivery service companies, and irrespective of whether the order was made online or offline.

The current situation

Similarly as for the delivery fees for online shopping, delivery fees for goods are currently either ignored, or already collected by some countries. While currently they should be added to the price of the product, in the future, they will be recorded under the new code.

Sampling

Regarding the sample of products and outlets, the existing samples are used as much as possible. In case of furniture a sample is most likely to exist already that can be used to collect the delivery cost for those products/outlets. In the case of meals, medicines, and delivery of groceries, since many countries do not cover those, a sample will need to be drawn up.

Product descriptions

Product descriptions for delivery of goods should follow the same methodology described before for the delivery fees for online shopping.

Price data

Similarly, to the delivery fees for online shopping, prices for delivery of goods can be listed and vary according to some specifications, or can be a fixed price, or can be for free under certain conditions. It may also happen that delivery fees are free under certain circumstances.

5. UPDATED SPECIAL AGGREGATES SERIES AND IMPACTS ON INDICES

The classification transition from ECOICOP to COICOP 2018 brings along several challenges, one of them being the compilation of special aggregates.

Eurostat calculates 38 special aggregates (hereafter SAs) for the HICP. Eleven SAs are also published in the monthly news releases. Until December 2016, the SAs were calculated from the 4-digit level indices of ECOICOP. Since January 2017, the lowest published level for the countries' HICP data became the 5-digit. Thereafter, the HICP SAs are calculated from the 5-digit of the ECOICOP classification.

Subsequently, since the SAs prior to January 2017 were calculated only from the 4-digit level indices, there exists a statistical break in the continuity of the SAs series between December 2016 and January 2017.

The calculation of the impact on the COICOP 2018 SA weights and price indices requires input that is not yet available. However, it will be interesting to draw on the experience and the first evidence from preliminary back series analysis.

5.1. New composition of the 38 SA in COICOP 2018

The following criteria, in decreasing order of importance, were used to specify the 38 SAs:

- Consistency with the flags included in COICOP 2018 ('services' (S), 'non-durables' (ND), 'semi-durables' (SD) and 'durables' (D)).
- Consistency with the classification correspondences between ECOICOP and COICOP 2018;
- Expected weights of the new COICOP 2018 subclasses, considering the 2021 weights of the corresponding ECOICOP subclasses and the detailed descriptions of the subclasses in COICOP 2018 against the ones in ECOICOP.

5.2. Classification changes among the 4 main SA

For illustration, the following classification transitions from one SA in the ECOICOP to another SA in COICOP 2018 are identified among the 4 main³ SAs:

- The new COICOP subclasses 01.3.0.0 'Services for processing primary goods for food and non-alcoholic beverages' and 02.2.0.0 'Alcohol production services' are currently implicitly included in SA 'Food including alcohol and tobacco' but will be in SA 'Services' under COICOP 2018;
- Software will move from the SA 'Non-energy industrial goods' to the SA 'Services'; the same is true for rental of game software, rental and repair of toys, repair of other personal effects n.e.c. and dentures.
- E-book downloads will become part of SA: 'Non-energy industrial goods' because COICOP 2018 does not distinguish between books, e-books and audiobooks.

5.3. Analysis of the impact on the divisions and the special aggregates' indices

Preliminary findings of the analysis of the back series data (period: 2015-2022) provided by Statistics Austria show that the impact of the classification change to COICOP 2018 on the main SA back series exhibits the following characteristics:

- The impact is contained in the divisions 7, 8, 9, 12 and 13.

⁽³⁾ Non-energy industrial goods, Energy, Food including alcohol and tobacco and Services. The total weight of the 4 main SAs adds to 1000.

- It is of a limited size as compared to the statistical break that followed the extension from the 4-digit level to the 5-digit level for the lower aggregates in ECOICOP (January 2017).
- It is visible only in the special aggregates related to services. This is due to the transition of the services component of the prices of the products in all other special aggregates to the services' special aggregates ('Services', 'Services related to communication', 'Services related to transport', etc.).

6. A TOOL FOR THE CALCULATION OF BACK SERIES

Eurostat has developed an Excel-based tool that can be used by countries in their back series compilation. The tool supports an 'automated' compilation of the COICOP 2018 back series, in the situation where the underlying data or available resources do not allow carrying out the conversion at the elementary aggregate level. The tool is based on the correspondence table between COICOP 2018 and ECOICOP, and the currently available HICP sub-indices and corresponding weights in ECOICOP. The current ECOICOP sub-index weights are to be sub-divided, by the statistical offices, over each correspondence item. The tool will then automatically calculate all weights and indices in COICOP 2018, ensuring that the overall inflation rate is not changed. The tool can be used in case the available sub-indices are at the 5-digit level, but also be configured for when the maximum available level is the 4, 3 or 2 digits.

It is assumed that countries can estimate the shares of the correspondence items within each ECOICOP sub-index. For recent years, such estimates may be based on recent household budget surveys (especially when they are using COICOP 2018 already). For reference years further back in the past, shares from recent years may be used as an approximation or other assumptions can be made.