

On the treatment of newly significant goods and services in the HICP: the cases of electricity markets, e-commerce and mobile telephony

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Abstract: The paper discusses the EU harmonised standard concerning the treatment of newly significant goods and services (NSG&S) in the Harmonized Index of Consumer Prices (HICP) and provides some specific information regarding the treatment of markets in the process of deregulation (e.g. electricity), e-commerce, and mobile telephony.

1. Introduction

The meaning of "new goods" is not always precise. The difference between new and improved is in fact arbitrary and there is no sharp dividing line between new models and varieties and genuine innovations which fulfil needs that could not be fulfilled before. Neither the index form nor the "step" or the frequency of renewing the basket of the index can address the real problem: the treatment of new goods. The risk of bias as a result of inappropriate treatment is rather high because the introduction of new models and varieties is often the "piggyback" to implement price increases.

The requirement in the framework HICP Council Regulation² to 'maintain the relevance of HICPs' means that steps must be taken to ensure that HICPs keep broadly in step with each other and are up-to-date in terms of market developments. The corresponding minimum standard on NSG&S is aimed at ensuring that new products are incorporated in the HICP as soon they achieve a sales volume of over one part per thousand of total consumers' expenditure in the Member State³. Eurostat is monitoring compliance with the HICP framework in order to ensure that the EU harmonized standards are met by EU Member States (MSs for short).

¹ The views expressed in this paper are those of the author; they do not necessarily reflect an official position of the European Commission (Eurostat).

² Council Regulation (EC) No 2494/95 of 23 October 1995 concerning harmonized indices of consumer prices (OJ L 257, 27.10.1995, p. 1).

³ Commission Regulation (EC) No 1749/96 of 9 September 1996 on initial implementing measures for Council Regulation (EC) No 2494/95 concerning harmonized indices of consumer prices (OJ L 229, 10.9.1996, p. 4), Article 2(b) "'Newly significant goods and services' are defined as those goods and services the price changes of which are not explicitly included in a Member State's HICP and the estimated consumers' expenditure on which has become at least one part per thousand of the expenditure covered by the HICP."

Early compliance monitoring exercises provided evidence that the NSG&S standard is interpretable in several ways. The aim of this paper is to summarise the procedures on NSG&S and split them into the elements needed to make the standard operational. Furthermore, it introduces briefly the notions of “product offers” and “(basic) user purposes”, currently under development at Eurostat as a means to support, among other things, the operation of the standard in practice. The paper also offers some thoughts on the treatment of specific cases such as electricity markets, e-commerce and mobile phones.

2. Newly significant goods and services⁴

In the context of the compliance monitoring exercise EU MSs reported on the procedures they had put in place in order to systematically identify NSG&S.

Typically, it is the price collectors who are supplying information on new goods and services (whether genuinely new or replacement products). Head offices observe market developments centrally and assess their observations together with the information supplied by price collectors.

In addition, MSs use information from National Accounts, Household Budget Surveys, production statistics or other sources like food surveys or import statistics. Furthermore, they examine magazines and periodicals (trade and consumer journals, commodity publications) and review newspapers and television advertisements. They collect information from industry, trade organisations, and trade representative bodies, institutional users, and associations of retailers and producers and consumer associations.

In MSs with fixed base indices (e.g. basket updated on a three to five year cycle) the search for newly significant goods and services is ongoing but particular focus is paid at each re-basing period when target samples are reviewed and new replacements or additional items are taken into the HICP. In Denmark each month one of the twelve main COICOP/HICP⁵ headings is checked, so that over one year all headings are checked. This may be seen as the most systematic procedure reported by a Member State and might be commended as such.

The term ‘newly significant’ was generally interpreted as ‘being new to the index’. There are two ways by which **new products** are introduced into the HICP if they have gained a significant part of consumption:

either

- **Replacement:** the new product replaces an already existing product that has lost importance; in other words a more up-to-date representative for a need or purpose already covered by the index is brought into the sample (e.g. a special variety of car tyres is replaced by a more representative one),

or

⁴ Report from the Commission to the Council on Harmonization of Consumer Price Indices in the European Union, COM(2000) 742 final, point 6.4.2.

⁵ COICOP/HICP is the Classification Of Individual COnsumption by Purpose adapted to the needs of the HICP.

- **Addition:** the new product is brought into the index in addition to the already covered products as representative for a newly significant or modified need or user purpose. The distinction is important both operationally and conceptually. The new product is either a replacement serving an existing reference purpose or it is additional in serving a purpose not yet represented in the index. ‘Newly significant goods’ relates to additions and not to replacements.

Additions (i.e. NSG&S) can have two main reasons:

either

- a new product that had not been represented in the index and would not normally be considered as a replacement because it was radically different from the existing variety (e.g. mobile phones). It would be added as a new category within an existing category,

or

- a product that was available but not explicitly represented because its consumption was too low. Inclusion was not a replacement within a category but a new category within a category (e.g. spaghetti in Denmark or lamb meat in the Netherlands).

In case of additions, the price of the new product is collected in addition to the already observed product; the minimum standard on NSG&S offers one of the following treatments:

- either adjusting the weights of the relevant category of COICOP/HICP, or
- adjusting the weights within the relevant category of COICOP/HICP, or
- assigning part of the weight specifically to the new product (i.e. underneath the 4-digit level of COICOP/HICP).

Replacements on the contrary are not affected by this standard because they do not have in principle an effect on the weights.

The differences between newly significant products and replacements are summarised in table 1.

According to the above, the minimum standard on NSG&S implies that:

- there is a certain expenditure group which has not been explicitly covered by the Member State’s HICP because its weight was lower than one part per thousand;
- this expenditure group must be covered explicitly because it has reached one part per thousand of the expenditure covered by this HICP;
- this group is represented by a certain NSG&S which itself does not need to have a weight of at least one part per thousand of the expenditure of this HICP.

Member States need thus to check

- whether the proposed products represent an expenditure group that is not yet explicitly covered by the index and
- whether this expenditure group has reached one part per thousand of the expenditure represented in the index,
- how this expenditure group should be explicitly implemented into the HICP and
- whether it could be represented by more appropriate price representatives than those proposed (some appropriate representatives might be contained in the list as reported by other Member States).

Table 1: Newly significant goods and services versus replacements

Additions (NSG&Ss)	Replacements
<i>Identifier:</i> New category of product (not yet existing in the HICP or implicitly covered) but not necessarily (technically) new (e.g. lamb meat).	Same category as existing product. E.g. new model of a TV set.
<i>Threshold:</i> For the first time consumed to a significant extent (one part per thousand).	No threshold set, but current sample should represent all models or varieties within a product category.
<i>Content:</i> Can consist of different variants (brands, models); one or many products are introduced (serving the same purpose).	Defined by previous referent. Basically, one to one replacement; one existing price representative is exchanged into another more representative product. However, many to one is not excluded.
<i>Weighting:</i> The particular weight is either not yet existing or needs to be adjusted in order to account for the newly significant product.	No immediate impact on weights.
<i>Price impact:</i> Introduction does not in itself impact on measured inflation.	Introduction should impact on measured inflation to the extent that the replacement involves price change after potential allowance for quality change.

In order to ensure that HICPs keep broadly in step with each other and are up-to-date in terms of market developments, Eurostat is monitoring regularly the inclusion of NSG&S into the HICP. In the context of this exercise, Eurostat may also suggest NSG&S for inclusion. In case of exclusion of NSG&S proposed by Eurostat, MSs should provide evidence that the maximum expenditure that could be represented by each of the proposed products was below one part per thousand of the expenditure covered by their HICP. Where appropriate, products should be grouped to higher-level expenditure groups (e.g. ecological/organic carrots and

potatoes belong to the same COICOP sub-index and might therefore represent the same expenditure group).

3. Genuinely new products versus new models and varieties

The distinction between genuinely new products and new models or varieties of existing products is not always a clear cut one. The question is how to design an appropriate device, with sufficient discriminatory power, in order to make such a distinction operational. For the HICP in particular, one wishes to ensure that no new models and varieties of reference products are excluded from the current sampling frame and new products which have become significant are included in accordance with the NSG&S standard, i.e. in the December reference sample.

The notions of “product offers” and “(basic) user purposes” are currently being developed at Eurostat and discussed at the HICP working party as a means to support, among other things, the operation of the NSG&S standard in practice. They should allow a principled and operationally feasible approach for distinguishing between genuinely new products and new models and varieties of existing ones.

A “product-offer” (PO) is an observable entity comprising a single product (a good or service) offered for purchase at a stated price, in a specific region and location (outlet) under specific conditions, at a specific time and in a certain socio-economic context (i.e. “directly satisfying particular consumer needs”). While PO defines a unique entity at any one time, it does not define one through time where products are modified or replaced by retailers and manufacturers.

Two POs (two reference POs, two current POs, or a current and a reference PO) are said to serve the same “basic user purpose” (or basic purpose for short) if they are chosen:

- by, to a large extent, the same categories of consumers;
- who perceive them as similar in spite of, or after accounting for, differences in their characteristics;
- for use in similar situations;
- on the basis of their predominant use and with similar ends in mind.⁶

The aim is to employ the criteria of this definition so that ‘basic purpose’ can serve to harmonise the operational identification of NSG&S by product-area across member States.

Emerging products which do not satisfy at least one of criteria (a) to (d) above are deemed to be genuine new products, thus falling outside the scope or the a-priori coverage of the basic reference purpose in question. As basic purposes are thought to be the lowest level of aggregation, they are by nature rather narrow; however they are broader aggregates compared to POs, which latter may be considered as clusters or sets of transactions.

⁶ See M. Ribe (2002), “What is quality adjustment about?”, and Eurostat (2003), “The HICP as an index defined on fixed user-purposes”.

4. New (electricity) suppliers

Following COICOP/HICP 04.5.1 “electricity” is a non-durable good, which may be described by means of basic purposes such as “purchase of a kWh by a certain category of households for domestic uses”. The appearance of a new supplier in the marketplace constitutes in fact a new PO which serves the same basic reference purpose.

From the perspective of the NSG&S standard, the new supplier should therefore be treated as a replacement. It should enter the index as soon as the new PO is deemed to be significant (and information becomes available on the number of households accepting the new PO). This might be done with or without quality adjustment (e.g. depending on diverging contract modalities and whether or not the PO is considered to involve a new outlet).

The introduction of the new supplier at a relatively early stage seems particularly important to the extent that its early price development may be systematically different from the price trend of the old supplier. It should be noted that the user-purpose approach actually precludes chaining in order to show no price change (e.g. the introduction of a new basic purpose on the assertion that electricity offered by the new supplier serves a different basic purpose due to diverging contract modalities, such as terms and conditions of supply).

In principle, the same applies generally to ‘utilities’ markets which are in the process of deregulation such as gas or telecom services. The situation may be described as the one above, where suppliers enter “the market” with POs serving existing basic purposes (apart from negligible changes due to design of bills or methods of payment). Significant changes in the quality of the products, if any (e.g. for gas with a different or modified calorific value, telephone calls at quite different modalities), would be treated as replacements and dealt with by means of quality adjustment. Realistically, price indices for deregulated utilities would fall as more households decide to switch to the new supplier.

It is mainly because of the monopolistic (or oligopolistic) character of such markets that for practicability reasons prices are collected centrally. This means that the sampling and replacement procedures in place will hardly detect the emerging new POs of new suppliers in the market. The user-purpose approach suggests a pro-active detection of eligible POs and ad-hoc gathering of relevant information in order that new suppliers enter the current index.

5. E-commerce (internet shopping)

Recent evidence on internet usage suggests that consumers are increasingly purchasing goods and services by means of internet orders. The HICP standard on newly significant goods and services standard hence suggests that MSs should expand their price collection in order to cover internet orders in their HICPs.

The case of internet shopping does not seem actually that different from the catalogue mail or phone ordering as compared for instance to the traditional (supermarket) shopping.

Basically it is not differences in the physical characteristics of purchased products as such which make these new POs be perceived as different or dissimilar by the relevant categories of consumers. It is rather the functionality of the POs concerned - i.e. a strong “home service” component - which hand in hand with the necessary computing skills and equipment makes the difference.

POs by internet suppliers though arguably serving the same user purposes cannot be said to serve the same basic purpose; although both can be said to be for use in similar situations, and chosen with similar ends in mind certainly consumers perceive them as different on the grounds of obvious differences in their functional characteristics. They serve thus different basic purposes, and do so presumably at diverging prices and diverging contract modalities (such as terms and conditions of supply).

It may well be that in the long-run internet shopping will replace a large portion of the catalogue ordering or traditional shopping. However, in the short-term, it can safely be said that they create (serve) new basic purposes and thus change or modify the existing upper level user-purpose.

It seems therefore appropriate to cover internet shopping by means of new basic purposes, i.e. as a newly significant product. This will require chaining-in additional elementary aggregates in the December following the earliest possible estimation of a reliable expenditure weight. Potential shifts from traditional shopping or catalogue ordering to internet shopping will in the mid-term be reflected in the HICP by means of updating their respective expenditure weights in the index reference period.

6. Mobile telephony

The emergence of the mobile telephony some years ago clearly modified the range of the existing POs and the basic user purposes they used to serve; such as purchase of equipment for fixed telephone communication and the purchase of the related communications services.

In some cases, it took a number of years until it was decided to let mobile telephony (equipment and services) enter the consumer price index. In some EU MSs the decision was first taken on the grounds of the HICP standard on newly significant goods and services.

The reasoning for the inclusion and the treatment of mobile telephony in the HICP under the NSG&S standard goes similarly to the one employed in the context of internet shopping.

Mobile phones and related services must be included in the HICP as soon as they are shown to be significant and reliable expenditure weights can be established. It is on the grounds of the difference in the way the new POs serve the basic telecommunication purposes of consumers that mobile telephony is seen as defining a new user purpose.

Since COICOP/HICP requires in principle the distinction between telephone service and equipment, the HICP must distinguish between at least two new basic purposes; one for the purchase of mobile phones and one (or maybe more) for the purchase of mobile telephony services.

Thus, mobile telephony should be covered in the HICP by means of new basic purposes, i.e. as a newly significant product. This will require chaining-in additional elementary aggregates in the December following the earliest possible estimation of a reliable expenditure weight.

As in the case of internet shopping, in the mid to the long-run mobile telephone may replace a large portion of the expenditure on fixed telephony as a result of gradual substitution. However, under the HICP perspective, the two POs belong to two distinct basic reference

purposes priced in the current index independently from one another. Here again, potential shifts from fixed to mobile telephony will be reflected in the HICP by means of updating their respective expenditure weights in the index reference period.

7. Conclusion

The operation of the standard has shown that MSs are making considerable progress in monitoring consumers' expenditure on newly significant products. Significant parts of consumers' expenditure have been added to the HICP. Compliance monitoring provided some rough indication that there may have been more products which should be considered beyond those currently reported by MSs.

The formulation of the standard seemed interpretable in different ways and this gave scope for further clarification, subject to its strong interaction with replacement and sampling rules. However, the requirement is that the number of elementary aggregates or the number of price representatives to be added to HICPs should be sufficient to represent the diversity of newly significant items and the variation of their price movements.

The NSG&S standard provides an operational and effective device to cope with emerging products and user purposes. The notions of POs and basic purposes seem particularly helpful to the devised procedure. The standard reflects the philosophy of the HICP: operational rules defined by observables rather than vague concepts actually define what is measured as inflation.

Notwithstanding 'subsidiarity' there can be no principled reason for MSs to differ on where they attempt to draw the line between 'replacements' and NSG&S; a distinction having direct effects on the measured inflation. We are seeking a common distinction which must be formulated in terms of operational rules to guide actual practice.

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