

2. Negotiation strategy & requirements for scanner-data deliveries



Why an agreement for scanner data delivery

First of all, why is it important to arrive at some kind of formal agreement with the companies?

1. If the CPI compilation is going to be based on the regular acquisition of scanner data, this means, for the products involved, abandoning the traditional data collection moving from a direct to an indirect way to collect the data
2. It implies that the NSOs do no longer have the total control of the production process of CPI given that are a few companies that send a big amount of data to the NSOs that wouldn't be able to detect them through the traditional ways



Why an agreement for scanner data delivery

3. Therefore, it is necessary to arrive at some kind of formal agreement with the data providers (either the large-scale retail-trade or the market analysis companies)
4. Arriving at establishing/signing a formal agreement with the companies, means to secure the production process of CPI also for the components depending on the acquisition of scanner data
5. This concern about how to secure the delivery of scanner data has to be considered also in the terms of the formal agreement (to guarantee the provision in case, for example, of change of the management of the companies)



Requirements for scanner data delivery and terms of the agreements with the companies

- Data requirements and terms of the agreement with the data providers are strictly related

Having clear the first (requirements) allow to well define the second (the terms of the agreement)



Requirements for scanner data delivery

What are the main data requirements to consider to compile CPIs by using scanner data and replace the traditional data collection?

1. Moving from the traditional data collection means moving from a shelf price to a price that is related to the effective monetary transaction occurred and obtained, usually, as the ratio between daily/weekly/monthly turnover and daily/weekly/monthly quantities.



Requirements for scanner data delivery

2. “Scanner data sets contain variety quantities sold and revenue received by the retailer for these varieties for some period of time, usually a week or a month. This information enables NSOs to calculate a price for an individual variety by dividing a variety’s revenue by the quantity sold. This price, referred to as a unit value, represents the average price experienced by consumers over a period of time.” (CPI Manual, 2020)



Requirements for scanner data delivery

3. Therefore, price information derived from scanner data set has to be strictly related to homogeneous products, with common, specific characteristics.
4. It has to be referred to a specific combination of brand, variety and package (elementary item) not to a generic product and, given that it is referred to monetary transaction, it should include possible discounts on the items



Requirements for scanner data delivery

Let's give an example of the meaning of unit value price.

In the case, for instance, of mineral water, the basic information necessary for CPI compilation is the price of mineral water, sparkling, in bottle by 1.5 liter (unit value price) not the average prices of a liter of mineral water independently on the package proposed (average values).

This is a crucial requirement to define the characteristics of the scanner data provision

Unit values YES, average values NO



Requirements for scanner data delivery

5. As a consequence of what is illustrated before, it is necessary to receive well detailed information on the characteristics of elementary items in order to compare like with like across the time (this is guaranteed by the availability of a unique code of the elementary item with a clear description)
6. Data must be representative of the temporal unit (usually the month for inflation estimates), of national/regional territory (depending on the sample design of the survey and the estimation domains) and of the universe of outlets across the country



Requirements for scanner data delivery

7. The frequency and the timeliness of data delivery has to be coherent with the dissemination calendar of CPI that, in general, is very tight in temporal terms
8. The price data detected has to be transmitted in a format that fulfills the requirements of the NSO's data base and through a secure protocol



Requirements for scanner data delivery

Let's summarize the main CPI requirements to consider for scanner data delivery

- Information on turnover and quantities to obtain unit value price/index
- Information on the specific characteristics of the elementary items (metadata)
- Representativeness of the country/region and of the universe of outlets
- High frequency (weekly at least) and timely data transmission
- Format that fulfills the requirements of the NSO's data base
- Secure protocol for the data transmission

7 keywords:

Unit value, metadata, representativeness, high frequency, timeliness,
format, secure protocol



Negotiation strategies and contents of agreement

- The requirements listed before have to be translated into the terms of the agreement (in any form it will be established) to negotiate with the large-scale retail trade companies
- It means to establish:
 1. The contents and the characteristics of the data set
 2. The rules of the data transmission



Negotiation strategies and contents of agreement

- The agreement negotiated has to establish:
 1. The contents and the characteristics of the data set, in terms of:
 - Identification of the elementary items (GTIN, SKU, PLU, Prdkey, others)
 - Description of the elementary items (Dictionary)
 - Availability of the universe of GTINs or of a sample of GTINs
 - Availability of the information referred to all outlets or a sample of outlets
 - Granularity of the statistical unit information (by elementary item and by outlet or by elementary item and geographical area, without information at outlet level)



Negotiation strategies and contents of agreement

Examples of agreements negotiated

- NSO Italy (triangle approach through market analysis company). Data provided refers to the retail outlet and GTIN code
- NSO Finland (bilateral agreements). Data provided refers to the GTIN code, but not the retail outlet



Negotiation strategies and contents of agreement

- The agreement negotiated has to establish:
 1. The contents and the characteristics of the data set, in terms of:
 - Geographical granularity of information (it depends on the regional variability of prices)
 - Time granularity (monthly, weekly or daily data)
 - Availability of turnover and quantities sold referred to the elementary item
 - File type and format (csv, txt, xml...)
 - Metadata



Negotiation strategies and contents of agreement

- The agreement negotiated has to establish:
 2. The rules of the data transmission, in terms of:
 - Timing (lag with respect to the reference period of the data, whatever it is the time granularity, day, week or month)
 - Data delivery and transfer method
 - Frequency of data transfer
 - Rules for update of the data in case of changes (revisions policy) and in case of unforeseen circumstances (mistakes) with a named contact to manage possible issues or mistakes



Negotiation strategies and contents of agreement

- The agreement negotiated has to establish:
 2. The rules of the data transmission, in terms of:
 - Security, data protection, unforeseen circumstances
 - Confidentiality and access Rights -- who is allowed to process the data -- and in which statistics they will be used together with the possibility to share data with third party
 - What service the NSO can provide in return for scanner data
 - Duration and termination of the agreement
 - Applicable law and competent courts



Negotiation strategies and contents of agreement

- ✓ Request of some preliminary data, for example, request one year of monthly data (best granularity possible) to investigate the weights and prepare the basis of the indices, to:
 - Better determine the granularity available
 - Better define the details within the agreement
 - To prepare the procedures to treat scanner data as far as they will be regularly delivered

