

Use of linking coefficients

The methodological changes or extraordinary updates of the directories used in the collective tourist accommodation occupancy surveys (hotel establishments, holiday dwellings, tourist campsites and rural tourism accommodation) imply that the data published introducing said changes is not directly comparable with the previously published data.

In order to avoid this break in the series, and allow for comparability, linking coefficients are calculated, to be applied to the published data before introducing the improvements.

Linking coefficients

Given the strong seasonal nature of these series, we have decided to obtain different linking coefficients for each month, thus maintaining the interannual variation rates of the series, although the same does not apply to the inter-monthly rates.

For each month, the linking coefficient for a variable X is obtained as the quotient between the estimated value of said variable in said month of year T , considering all of the available information (methodological changes and/or improvements in the directory) and the estimated value in the same month without considering the innovations.

$$CX_{i,T} = \frac{X_{i,T}^{with\ improvements}}{X_{i,T}^{without\ improvements}}$$

where:

$i = 1 \dots 12$ months

$X_{i,T}^{with\ improvements}$ = Estimated value of variable X in month i of year T , using all of the information available.

$X_{i,T}^{without\ improvements}$ = Estimated value of variable X in month i of year T , without considering the innovations.

Linked series

The series that are linked and comparable with the data published are calculated by multiplying the published series (prior to the date on which the improvements are introduced) by the linking coefficient of the corresponding month.

$$X_{i,T-j}^{linked} = X_{i,T-j}^{pub} \times CX_{i,T}$$

where:

$i = 1..12$ months

$X_{i,T-j}^{pub}$ = Published estimated value of variable X in month i of year $T-j$
(where $j > 0$)

$CX_{i,T}$ = Linking coefficient for variable X in month i

Given that the linking coefficients are calculated independently for each geographical breakdown, each category or each nationality, the linked series lose their additivity.