# Reliability limits 

## EU - LFS publishing guidelines

EU labour force survey - data and publication

Eurostat implements basic guidelines in order to avoid the publication of figures which are statistically unreliable or which risk the identification of individual respondents. For this reason, there are two types of restrictions: a reliability restriction and a confidentiality restriction.

Regarding confidentiality restrictions, Eurostat does not disseminate EU-LFS estimates based on 3 or less reporting units. As an indicative rule of thumb, this typically corresponds to population estimates of some 200-400 persons or less. This restriction is mainly relevant for EU-LFS data tailored for specific requests. In those cases, the user will receive a data file with the corresponding entry flagged ' $c$ ' and the value blanked. These entries will still be visible and thus indicate that some values below confidentiality limits have been removed.

Regarding reliability restrictions, Eurostat flags estimates below certain limits as 'a' and 'b'. Those reliability limits depend on the sample size and design in the individual Member States. This applies to quarterly data, annual averages and ad hoc modules results. Figures flagged 'a' should not be published; by convention, a dot or full stop is used instead. Figures flagged 'b', whenever applicable, can be published with a warning concerning their limited reliability. By convention, they are published in brackets.

From 2006 onwards, the EU LFS can provide three types of results according to the sample used: quarterly data, annual average of quarterly data or yearly data. The latter corresponds to the best sample available for all variables for a given country and year. It corresponds either to one single quarter (generally quarter 2), the average of quarterly data or to a sub-sample distributed along the year (with sample size in general roughly equivalent to one reference quarter).

The reliability limits applicable HRST using EU-LFS are the yearly limits.

## Reliability

EU LFS yearly limits - reliability limits

The EU Labour Force Survey, like all surveys, is based on a sample of the population. The results are therefore subject to the usual types of errors associated with sampling techniques. Based on the sample size and design in the various Member States, Eurostat implements basic guidelines intended to avoid the publication of figures which are statistically unreliable.

HRST data are extracted from the European Union Labour Force Survey (EU LFS). The estimated totals could therefore be subject to sampling errors, as well as a number of non-sampling errors, e.g. nonresponse, miscoding, etc. All estimated results conform to Eurostat guidelines on sample-size limitations and are not published if the degree of sampling error is likely to be high.

Figures below those in column $A$ in the tables below are not published. Instead, a ":u" is used, which corresponds to 'not reliable'. When applicable, figures below those given in column B but above those in column A are printed with a warning concerning their reliability. These data are flagged with a "u", showing a lack of reliability due to a reduced sample size.

Because disaggregation of the data to regional level increases the likelihood that certain data fall into one or other of the categories listed in the table below, it may be that certain data are omitted at NUTS 2 level but are included at NUTS levels 0 or 1 . Users should be aware that in such cases the total presented, for example at the NUTS 0 level, may equal more than the sum of its presented constituent parts (at NUTS 2 level).

Table 1: Guidelines on minimum sample sizes for data reliability provided by the EU LFS unit (limits to be used for yearly data)

| Country | 2008 |  | 2009 |  | 2010 |  | 2011 |  | 2012 |  | 2013 |  | 2014 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Limit_A | Limit_B | Limit_A | Limit_B | Limit_A | Limit_B | Limit_A | Limit_B | Limit_A | Limit_B | Limit_A | Limit_B | Limit_A | Limit_B |
| $\begin{aligned} & \hline \text { EU-27/ } \\ & \text { EU-28 } \end{aligned}$ | 50000 | 50000 | 50000 | 50000 | 50000 | 50000 | 50000 | 50000 | 20000 | 40000 | 20000 | 40000 | 20000 | 40000 |
| BE | 2000 | 5000 | 2000 | 5000 | 2000 | 5000 | 2000 | 5000 | 2000 | 5000 | 2000 | 5000 | 2000 | 5000 |
| BG | 5300 | 12000 | 5300 | 12000 | 6200 | 14000 | 6200 | 14000 | 7000 | 16000 | 5600 | 12600 | 5600 | 12600 |
| CZ | 500 | 3000 | 500 | 3000 | 500 | 3000 | 900 | 6000 | 900 | 6000 | 1000 | 6000 | 1000 | 6000 |
| DK | 2000 | 4000 | 2000 | 4000 | 2000 | 4000 | 2000 | 4000 | 2000 | 4000 | 2000 | 4000 | 2000 | 4000 |
| DE | 50000 | 50000 | 50000 | 50000 | 50000 | 50000 | 50000 | 50000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| EE | 1275 | 2950 | 1350 | 3125 | 1325 | 3050 | 1100 | 2600 | 1100 | 2600 | 1100 | 2600 | 1100 | 2600 |
| IE | 1900 | 3100 | 1900 | 3100 | 1900 | 3100 | 1900 | 3100 | 1900 | 3100 | 1900 | 3100 | 1900 | 3100 |
| EL | 1300 | 3500 | 1300 | 3500 | 1300 | 3500 | 1300 | 3500 | 1300 | 3500 | 1300 | 3500 | 1300 | 3500 |
| ES | 2000 | 8000 | 2000 | 8000 | 2000 | 8000 | 2000 | 8000 | 2000 | 8000 | 2000 | 8000 | 2000 | 8000 |
| FR | 25000 | 50000 | 22000 | 44000 | 20000 | 40000 | 20000 | 40000 | 20000 | 40000 | 20000 | 40000 | 20000 | 40000 |
| HR | 1000 | 10000 | 1000 | 10000 | 1000 | 10000 | 1000 | 10000 | 1000 | 10000 | 1000 | 10000 | 1000 | 10000 |
| IT | 1500 | 2500 | 1500 | 2500 | 1500 | 2500 | 1500 | 2500 | 1500 | 2500 | 1500 | 2500 | 1500 | 2500 |
| CY | 500 | 1500 | 500 | 1500 | 500 | 1500 | 500 | 1500 | 500 | 1500 | 500 | 1500 | 500 | 1500 |
| LV | 1100 | 1800 | 1700 | 2700 | 2200 | 3600 | 1900 | 3100 | 1600 | 2600 | 1700 | 2700 | 1700 | 2700 |
| LT | 5900 | 22500 | 4500 | 8000 | 4500 | 8000 | 4500 | 8000 | 4500 | 8000 | 4500 | 8000 | 4500 | 8000 |
| LU | 500 | 1000 | 500 | 1000 | 500 | 1000 | 500 | 1000 | 500 | 1000 | 500 | 1000 | 500 | 1000 |
| HU | 2600 | 4800 | 2600 | 4800 | 2600 | 4800 | 2600 | 4800 | 2600 | 4800 | 2600 | 4800 | 2600 | 4800 |
| MT | 375 | 750 | 375 | 750 | 375 | 750 | 375 | 750 | 350 | 800 | 350 | 850 | 350 | 850 |
| NL | 1500 | 5000 | 1500 | 5000 | 1500 | 6500 | 1500 | 6500 | 1500 | 6500 | 1500 | 6500 | 1500 | 6500 |
| AT | 3000 | 6000 | 3000 | 6000 | 3000 | 6000 | 3000 | 6000 | 3000 | 6000 | 3000 | 6000 | 3000 | 6000 |
| PL | 5000 | 15000 | 5000 | 15000 | 5000 | 15000 | 5000 | 15000 | 5000 | 15000 | 5000 | 15000 | 5000 | 15000 |
| PT | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 |
| RO | 6500 | 11500 | 6500 | 11500 | 6500 | 11500 | 6500 | 11500 | 6500 | 11500 | 6500 | 11500 | 6500 | 11500 |
| SI | 500 | 4000 | 500 | 4000 | 500 | 4000 | 500 | 4000 | 500 | 4000 | 500 | 4000 | 500 | 4000 |
| SK | 2000 | 3000 | 2000 | 3000 | 2000 | 3000 | 2000 | 3000 | 2000 | 3000 | 2000 | 3000 | 2000 | 3000 |
| FI | 2000 | 4000 | 2000 | 4000 | 2000 | 4000 | 2000 | 4000 | 2000 | 4000 | 2000 | 4000 | 2000 | 4000 |
| SE | 2500 | 3500 | 2500 | 3500 | 1000 | 2000 | 1000 | 2000 | 1000 | 2000 | 1000 | 2000 | 1000 | 2000 |
| UK | 10000 | 19000 | 10000 | 19000 | 10000 | 19000 | 10000 | 19000 | 10000 | 19000 | 10000 | 19000 | 10000 | 19000 |
| IS | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| NO | 1500 | 5000 | 1500 | 5000 | 2000 | 5500 | 2000 | 5500 | 2000 | 5500 | 2000 | 5500 | 2000 | 5500 |
| CH | . |  | . | . | 1000 | 5000 | 1000 | 5000 | 1000 | 5000 | 1000 | 5000 | 1000 | 5000 |
| MK | 500 | 1000 | 500 | 1000 | 500 | 1100 | 500 | 1100 | 500 | 1100 | 500 | 1100 | 500 | 1100 |
| TR | 500 | 2500 | 500 | 2500 | 500 | 2500 | 500 | 2500 | 500 | 2500 | 500 | 2500 | 500 | 2500 |

