EU labour force survey – data and publication

Statistics Explained

This article explains Eurostat's offer of European labour force survey (EU-LFS) statistical data. It gives an overview of the availability of the results for users, describes the various dissemination channels, and explains the dissemination policy by presenting the publishing guidelines as well as information on the comparability of the EU-LFS results.

This article is part of a **set of online articles** on the EU-LFS.

Structure of EU-LFS dissemination

Eurostat disseminates EU-LFS data through four main channels:

1. Tables in the online database

Most, but not all, of Eurostat's EU-LFS data offer consists of tables disseminated in Eurostat's online database in the theme ' Employment and unemployment (Labour Force Survey)' according to the following categories:

- LFS main indicators (a set of specific EU-LFS results which are updated quarterly and monthly unemployment)
- LFS detailed quarterly survey results
- LFS detailed annual survey results
- LFS specific topics
- LFS ad-hoc modules

To access the results, please consult: EU-LFS database . In addition, some EU-LFS data are also released under the themes Education and training and Regional statistics .

2. Statistical publications

3. Anonymised datasets for researchers

4. Tailor-made extractions for tables not available in the online database

Eurobase tables and datasets

Main indicators

The main indicators is a collection of the most important EU LFS results. The aim of the main indicators is to provide users with key statistics on the labour market. Special work is done to ensure that the main indicators can be used as time series. In general, the adjusted series are the result of corrections of main breaks in series, estimation of missing values and reconciliations of the EU-LFS data with other sources, mainly National Accounts and national statistics on monthly unemployment. For the period previous to 2005, when the EU-LFS was conducted annually instead of quarterly in some countries, published data are the result of an interpolation of available annual data into quarterly data.

EU-LFS main indicators are estimated and updated four times a year. Whenever some indicator is published both in EU-LFS main indicators and in detailed survey results (see EU-LFS data), for instance the unemployment rates, the reference figure is published under main indicators.
All main indicators are predefined and users can access the information in the form of tables, graphs and maps.

Release calendar : The production of the main indicators (quarterly results) is accompanied by an EU-LFS release calendar , which provides transparency for users on the availability of the data and favours a timeliness data release of the results.

EU-LFS detailed data

The EU-LFS database contains detailed statistical information for users.

1. Detailed quarterly and annual EU-LFS results

The aim of the quarterly and annual EU-LFS results is to provide users with more in-depth statistics on the labour market, with breakdowns by explanatory variables not available in the LFS main indicators. The results are fully based on the EU-LFS and no adjustments or corrections are applied. This can lead to occasional data gaps or breaks in time series.

From 2005 onwards, with few exceptions, the annual results present annual averages of quarterly data. Up until 2005, the annual results are mostly based on 'spring data – second quarter', due to the limited availability of quarterly data.
The detailed results contain information on the following subjects: total population, people in the labour force, employment, self-employment, employees, temporary employment, full-time and part-time employment, population in employment having a second job, working time, total unemployment and people outside the labour force. The user can access and extract statistics according to specific dimensions (variables) like sex, age, highest level of education, nationality or characteristics related to economic labour conditions.

2. LFS specific topics

Specific topics currently covered are EU-LFS statistics for households, EU-LFS data by region, EU-LFS data on labour mobility and recent immigrants. Only annual data are available. Updates are usually less frequent than for the quarterly and annual domains.

3. LFS modules

From 1999 to 2020, the EU-LFS was supplemented every year with so called EU-LFS ad-hoc modules. There was a different ad-hoc module every year. Since 2021, there is a combination of 8-yearly regular modules in two blocks of three modules, with an ad-hoc subject every four years. The purpose of the modules is to provide users with statistics on a specific topic concerning the labour market by adding each year a set of variables to supplement the core EU-LFS.

For full information on the output of each module, as well as extensive documentation, please consult EU-LFS modules .

Statistical publications

The EU-LFS results are also disseminated in print or electronic publications concerning statistics on the labour market or population and social conditions.

Shorter electronic publications on main EU-LFS results for a variety of topics as well as for specific analyses are presented in Eurostat's Statistics in Euro Indicators and News Items. Other articles are published on the official Eurostat webpage Statistics Explained under the topic Labour market . The results are also published in pocketbooks on labour market statistics or social statistics as well as in Eurostat's Yearbook and Regional Yearbook. To access the publication, please consult: Publications (Eurostat Labour market website) .

The EU-LFS also disseminates publications on the methodology of the survey. For more information please consult: Quality reporting .

Policy making indicators

The European Commission (EC) bases several EU policy indicators on the EU-LFS results: Employment and social policy indicators, European and national indicators / Principal European Economic Indicators, Macroeconomic Imbalance Procedure (MIPS), Sustainable development indicators. For more information and a complete list of indicators, please consult EU policy indicators .

Additionally, the EU-LFS results are used in a series of analyses published by the European Commission. The EU-LFS is one of the main sources used in the Annual Employment Report. This publication provides analytical and statistical background to the European Employment Strategy.

Publication guidelines and thresholds

The EU-LFS, like all surveys, is based upon a sample of the population. The results are therefore subject to the usual types of errors associated with sampling techniques. Eurostat implements basic guidelines intended to avoid publication of results which are statistically unreliable or which risk allowing identification of individual respondents.

Eurostat flags EU-LFS estimates below reliability limits called 'a' and 'b'. Those reliability limits depend on the sample size and design in the individual Member States and refer to weighted data. 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. This applies to quarterly data, annual averages of quarterly data, yearly data and ad hoc module results.

In the database, results below the 'a' limit are blanked using a colon (:) and results below the 'b' limit and above the 'a' limit are published as unreliable by putting a 'u' in brackets behind the results (u).

In the EU-LFS extractions, which are tailor-made tables with weighted results, results below the 'a' limit are flagged 'x' and are deleted from the extraction. In fact, the entry itself is still visible and a blank cell indicates that a value below reliability limits has been removed. Results between the 'b' limit and the 'a' limit are visible and flagged 'u' (for low reliability).

It is important to note that data for Spain and Sweden are subject to the application of small random perturbations in the EU-LFS extractions. This can lead to loss of data consistency for these two countries, both as regards additivity for (sub-)totals and comparability with results published elsewhere (e.g. by Eurostat or NSIs).

Content of the EU-LFS data extractions is also subject to the following limitations: 1) no results by individual nationality or country of birth outside Europe are provided (only results by groups of non-European countries are transmitted); 2) no results by single-year age bands are provided; 3) the percentage of cells flagged "x" in the table should not exceed 70%. The rate of 70% has been set up to avoid EU-LFS data extractions with contents close to micro-data file (to avoid crossing too many variables, or crossing several variables at a too detailed level). Request for EU-LFS data extraction is not accepted when it results in a table with more than 70% of cells flagged "x".

In addition to reliability limits for individual countries, limits for groups of countries are also included in the overview tables (see below). Values for such groups of countries are calculated as the maximum of the values of the countries belonging to the group. In most cases, data released by Eurostat will conform to these rules. If specific directions listed in Regulation (EU) No 557/2013 are respected, figures may be provided to researchers in scientific use files without the modifications described above. This is done to enable them to develop their own aggregated tables during the course of their analysis. When these aggregations have been finalised, the guidelines outlined above must again be observed. Compliance with this principle is considered as a condition of the release of data in this form. More information is available on the page on access to microdata .

Overview of the limits for the specific data :

From 2006 onwards, the EU-LFS can provide three types of core results according to the sample used: quarterly data, annual averages of quarterly data and yearly data. The latter corresponds to the best sample available for all variables for a given country and year. It corresponds either to the average of quarterly data or to a sub-sample distributed along the year. For details on this structure see "EU-LFS database user guide" . Moreover, the yearly changing ad-hoc modules require a further set of limits.

The complete list of reliability limits from 1983 is available as an Excel file . The limits are expressed in thousands of the weighted population. The sub-scenarios refer to the various sets of variables and related (sub)samples using different limits:

- quarterly: S_Q,
- annual: S_Y,
- biennial: S _2Y,
- household, using individual weights: S_HH,
- household, using average weights: S_HHAVG,
- modules: S_MOD.

Comparability over time and across countries

Note: This section applies only to **LFS detailed survey results series** as the LFS main indicators include corrections for breaks.

Since 1983, improved comparability between results of successive surveys has been achieved, mainly due to increased harmonisation, greater stability of content and higher frequency of surveys. However, the following factors may somewhat detract from perfect comparability:

- population figures used for population adjustment are revised at certain intervals on the basis of new population censuses;
- reference periods may not have remained the same for a given country due to the transition to a quarterly continuous survey;
- countries may have modified their survey methodology;
- in order to improve the quality of results, countries may have changed the content or order of their questionnaire.

Transition to a quarterly continuous survey

From 1983 to 1997, the EU Labour Force Survey was conducted only in spring (quarter 1 or 2 depending on the country). Data for the remaining quarters started to become progressively available from 1998 onwards. Since 1998, the transition to a quarterly continuous survey (with reference weeks spread uniformly throughout the year)

has been gradually conducted by Member States. Some countries first introduced a continuous annual survey (meaning the reference weeks were uniformly distributed throughout the spring quarter) and then switched to a quarterly collection, whereas others moved directly to a quarterly continuous survey.

Regulation (EC) No 1991/2002 of the European Parliament and of the Council introduced a deadline for the transition period given to Member States to introduce a continuous quarterly survey. Table 1 shows the transition phase to the continuous survey for each country. The main breaks due to this transition are highlighted in **bold** .

Table 1: Breaks due to the transition to a quarterly continuous survey

Break due to the introduction of the IESS Framework Regulation and LFS Implementing Regulation in 2021

Since 1 January 2021, the EU-LFS is based on Regulation (EU) 2019/1700 , also called the Integrated European Social Statistics Framework Regulation (IESS FR), and its Commission Implementing Regulation (EU) 2019/2240 , so that all series report a break flag in 2021 accordingly. For more details concerning changes in the methodology, see the dedicated Statistics Explained webpage on methodology .

Breaks due to census revisions

Back data revisions of population figures used for population adjustment (triggered by Census 2001 and Census 2011 results) led to a break in series in some countries. Ireland carried out a Census also in 2016. All series report a break flag in 2017.

Table 2: Breaks due to census revisions

2021 in parentheses: no census b flag set because of general break flag due to new regulation.

Countries using a sub-sample for the collection of structural variables

Under Regulation (EC) No 2257/2003 , and subsequently the Implementing Regulation (EC) No 2019/2240 , a set of specific variables, referred to as structural variables (annual, biennial, eight-yearly variable or a variable collected on an ad hoc subject as well as the 'minimum set of variables' that is the variables to be collected for all household members), need to be surveyed only as annual averages with reference to 52 weeks rather than as quarterly averages. From 2021 onwards all countries use a sub-sample to survey all or some of the structural variables. Previously the option to use sub-sampling was voluntary and only few countries adopted it. In addition, Germany used a sub-sample from 2006 to 2011. For structural variables no quarterly results exists, and their yearly results from 2006 onwards are in general either based on the average of 4 quarters (for countries not using a sub-sample) or the respective yearly sub-sample for countries using that approach.

Table 3: Countries using a sub-sample for the collection of structural variables

Breaks due to revised classifications or regulations

The EU-LFS uses international classifications for coding certain variables. These classifications are subject to regular revisions. The implementation of such revised classifications as well as revisions of specific LFS regulations may also lead to breaks in series.

Table 4: General breaks due to revised classifications/regulations

Country	Spring results	Quarterly results	Continuous survey from	Remarks
BE	1983	1999	**1999**	-
BG	-	2000	(2003)	2000-2002: One week per quarter 2003+: Uniformly spread over the first 12 weeks of each quarter
CZ	-	1998	1997	1997: Seasonal quarters 2 and 4
DK	1983	1999	1994	1992-1993: More than one week spread unequally over 1st and 2nd quarter
DE	1983	2005	**2005**	1983-2004: One week per quarter2005+: Quarterly continuous survey
EE	1997	2000	2000	1997-1999: All weeks in 2nd quarter, not uniformly spread
IE	1983	1999q2	**1998**	1992-1997: More than one week, but not uniformly spread in one quarter 1998-2006: Seasonal quarters
EL	1983	1998	1996	1992-1995: All weeks in 2nd quarter, not uniformly spread
ES	1986	1996	1999	1996-1998: Evenly spread with the exception of 4 weeks in August (not surveyed due to interviewers' holidays)
FR	1983	2003	**2003**	1992-2002: More than one week, but not uniformly spread in one quarter
HR	2002	2007	2007	2002-2006: Half-year results, one reference week per month, uniformly spread over the months
IT	1983	1997q2	**2004**	1983-2003: One week per quarter
CY	1999	2004q2	1999	-
LV	1998	2002	**2002**	1998-2001: All weeks in 2nd and 4th quarter, not uniformly spread (semi-annual results)
LT	1998	2002	**2002q3**	1998-2001: One week in 2nd and 4th quarter each (semi-annual results) 2002q1-q2: One week per quarter
LU	1983	**2007**	**(2003)**	1983-2002: One week per quarter 2003-2006: All weeks of the year, but not uniformly spread and no quarterly results
HU	1996	1999	2003	1999-2002: One week per month 2003-2005: 3 weeks per month, not uniformly spread 2006+: All weeks surveyed, nearly uniformly spread
MT	2000	2002	2004	-
NL	1987	2000	2000	1992-1999: 1st to 22nd/23rd week surveyed, not uniformly spread
AT	1995	1999	**2004**	1995-2003: More than one week at the end of the quarter, not uniformly spread
PL	1997	2000	**2000**	-
PT	1986	1996q2	1998	1996-1997: More than one week per quarter, not uniformly spread
RO	1997	1999	(1998)	1998-2004: Most or all weeks of the quarter, not evenly spread 2005: Uniformly spread over 12 weeks each quarter 2006+: Uniformly spread over all weeks of each quarter
SI	1996	1999	(2002)	1996-2001: One week per quarter 2002-2005: All or most weeks surveyed, not uniformly spread 2006+: All weeks surveyed, nearly uniformly spread
SK	-	1998	1998	1998-1999: Seasonal quarters
FI	1995	1998	**2000**	1995-1999: One week per month 2000+: Monthly survey. Uniformly spread over the weeks of the month, months of each quarter have 4-4-5 weeks
SE	1995	**2001**	1999	1995-1998: Uniformly spread over 4 weeks of one

Country	Census 2001	Census 2011	Census 2021
BG	2001	2010	2019
CZ		2011	
DE		2010	
EE		2000	
IE		2007	(2021)
EL	1998	2001	
ES			(2021)
HR			2019
IT		2004	2018
CY		2009	2023
HU	2001		
MT		2005	
PL		2010	2019
PT		1998	2011
RO	2003	2010	
SK		2011	
UK	1999		
RS			(2021)

Since/For	Country
2006	ES, FR, NL, NO
2006-2011	DE
2007	FI
2008	BG, UK
2010	CH
2011	CZ
2015	LU
2017	BE, LV
2020	DE
2021	IE, EL, MT, PT, SE

Year	Revisions
1992	Introduction of the ISCO-88 (COM) classification
1998	Introduction of the ISCED 1997 classification
2003	Variables relating to participation in education and to highest completed education were completely revised by Regulation (EC) No 2104/2002 . As a result the comparability with previous years, especially with regard to participation in education (derived variable EDUC4WN) is limited. Most countries introduced the respective changes in 2003, 2004 or 2005. For the exact change date, please review the country list (below).
2006	Variable "EDUCSTAT": category “student on holidays” separated from “has not been a student or apprentice” (exceptions of implementation dates: SE 2006 Q2, SI 2006 Q2, SK 2006 Q2, DK 2007 Q1 MK 2007 Q1, PL 2007 Q2, DE 2008 Q1, EE 2009 Q1, IS 2009 Q2, FR 2013 Q1, no changes: CH,FI)
2008	Introduction of the NACE Rev. 2 classification
2011	Introduction of the ISCO-08 classification
2012	Introduction of the new DEGURBA classification
2014	Introduction of the ISCED 2011 classification
2016	Introduction of the ISCED-F 2013 classification

Other country specific breaks

In order to improve the quality of results, countries modified for instance the survey or sample design, the weighting scheme, or the content of the questionnaire. For detailed information on such country specific breaks, please consult: country specific breaks (Excel file) .

For an overview of all data revisions received by Eurostat since 2005, please consult LFS-data-revisions .

Impact of the general structure of Eurostat's EU-LFS database on breaks in series

In order to facilitate cross-country and time comparisons at EU level as much as possible, Eurostat had to take some decisions on how to organise the available EU-LFS country data. In consequence, the structure of the database has to be taken into account as well. The latest change in that respect, is the change resulting from updated labour status definitions in 2021 as the updated definitions of the labour status are part of aforementioned regulations 2019/1700 and 2019/2240 for the labour market domain entering into force in 2021. Further information on the impact of the general structure of the EU-LFS database on breaks in series can be found in the dedicated Statistics Explained webpage .

Data for researchers

Availability and release of anonymised LFS microdata

The current legal framework enables access to anonymised LFS microdata available at Eurostat for scientific purposes only, also referred to as scientific use files. The available datasets are disseminated free of charge. The scientific use files are updated on a yearly basis and become available to users at the end of a year. New data usually added in the release of year Y are core LFS data for year Y-1. All revisions of other datasets which were transmitted to Eurostat since the previous release are included as well.

National Statistical Institutes transmit LFS microdata to Eurostat, but they remain owners of their data. LFS microdata are confidential data which contain information about individual statistical units. In order to minimize the risk of disclosure of the statistical units to which the records relate, anonymisation criteria are applied to both core and ad-hoc module scientific use files. This consists of deleting certain variables and aggregating others. The anonymisation and aggregation criteria are defined and agreed regularly between Eurostat and the National Statistical Institutes in the Working Group Labour Market Statistics, enabling Eurostat to make EU-LFS microdata available to researchers.

For more specific conditions on how to obtain microdata, please consult: Access to EU-LFS microdata .

See also

- European Labour Force Survey (EU-LFS)

Dedicated section

- Labour market (including Labour Force Survey)