Quality report of the European Union Labour Force Survey 2020

2022 edition

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List of abbreviations

CAPI	Computer Assisted Personal Interviewing
CATI	Computer Assisted Telephone Interviewing
CAWI	Computer Assisted Web Interviewing
EC	European Commission
EFTA	European Free Trade Association
EU	European Union
FSU	Final sampling unit
ILO	International Labour Organisation
ISCED	International Standard Classification of Education
LFS	Labour Force Survey
NSIs	National Statistical Institutes
NUTS	Nomenclature des Unités Territoriales Statistiques / Nomenclature of Territorial Units for Statistics (NUTS0-NUTS3)
LAU	Local Administrative Units
PAPI	Paper and Pencil Interviewing
PSU	Primary sampling unit
Q	Quarter

Contents

1 Introduction

The quality concept applied in this report is in conformity with the definition developed by the European Statistical System and reported in the European Statistics Code of Practice [1]. According to this definition, the quality of a statistical output includes the following components: relevance, accuracy and reliability, timeliness and punctuality, comparability and coherence, accessibility and clarity. Each quality component consists of several sub-components and is shortly explained at the start of the respective section in this report [2].

The individual country quality reports of the 2020 European Union Labour Force Survey (EU-LFS) were submitted to Eurostat in the summer of 2021. They are the main sources for the present report. In addition, supplementary metadata provided to Eurostat from the participating countries, national quality reports from previous years, websites of the individual National Statistical Institutes (NSIs), the EU-LFS datasets for 2020 and the reference metadata on the datasets disseminated by Eurostat were used or consulted to produce this report.

The present quality report closely follows the standard quality report format developed by Eurostat. The goal of this standard format is to report homogeneous production processes within each country. However, since the EU-LFS is the result of the collection of national datasets from the NSIs, in many cases it is impossible to present the data exactly as required. Information from the individual countries is, in some cases, not sufficient to provide a comprehensive summary.

Chapter 9 of the present report covers the regional aspects of the EU-LFS and was written jointly by the units within Eurostat dealing with labour market and regional statistics.

This quality report complements the statistical report describing the characteristics of the national surveys in the EU Member States, EFTA and candidate countries, also available on the Eurostat website [3].

Eurostat wishes to thank all experts in the countries for their participation in the EU-LFS, for providing the data and descriptions as well as for their essential support in compiling this report.

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[1] Available at: https://ec.europa.eu/eurostat/web/products-catalogues/-/KS-02-18-142

[2] Most of the introductory texts shortly explaining each quality component are taken from the 'ESS handbook for Quality Reports', available at: https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/ks-gq-21-021

[3] Available at: https://ec.europa.eu/eurostat/en/web/products-statistical-reports/-/KS-FT-22-001

2 Overview of the EU-LFS designs and methods in 2020

2.1 Coverage

This report covers the thirty-four participating countries that provided Eurostat with quarterly microdata from their labour force surveys in 2020: the Member States of the European Union (EU), three EFTA countries (Iceland, Norway and Switzerland) and four candidate countries (Montenegro, North Macedonia, Serbia and Turkey). The survey covers the whole territory of the participating countries, with the exception of Cyprus that only covers the areas under the control of the government of the Republic of Cyprus. Since 2014, the French overseas departments are also covered (Guadeloupe, Martinique, Guyane, La Réunion), with the exception of Mayotte [4].

The EU-LFS covers persons in private households. However, in several countries, members of collective households are also sampled, either directly (register based sampling frames) as in Denmark, Germany, Estonia, Finland, Sweden, Iceland and Norway or indirectly through their relationship with the sampled household as in Bulgaria, Spain, Cyprus, Portugal, Romania and Slovakia.

In the majority of the participating countries, the population interviewed about the employment status, is in compliance with the EU-LFS requirements and definitions, 15 years and older, with the exception of Spain and Italy (which interview people aged 16+) as well as Denmark, Estonia, Latvia, Hungary, Finland, Sweden and Norway (people aged 15-74), Belgium (people aged 15-76), Iceland (people aged 16-74), Switzerland (people aged 15-89) and the North Macedonia (people aged 15-79).

2.2 Legal basis

The EU-LFS is based on European legislation since 1973. The principal legal act, in 2020, was the Council Regulation (EC) No 577/98. The regulations are an important element assuring the quality of the EU- LFS. They specify rules and guidelines to assure the comparability of the results by regulating the methodology and the survey characteristics of the EU-LFS. A detailed overview of the EU-LFS regulations is published in Statistics Explained at 'EU-LFS – main features and legal basis' [5].

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[4] Until 2014, the French overseas departments (Département d'outre-mer – DOM) only had a partial coverage over time, as data collection only referred to Q2. In Mayotte this is still the case and 2020 data for this department is still not included in the standard French datasets. Data from Mayotte is nevertheless included in the regional tables.

[5] See https://ec.europa.eu/eurostat/statistics-explained/index.php?title=EU_labour_force_survey_%E2%80%93_main_features_and_legal_basis

In addition to European regulations, many participating countries have their own national legislation for the implementation of their labour force survey. Detailed information on the national laws or regulations is not provided in this report.

The participation in the EU-LFS is compulsory for the population in 14 participating countries (Belgium, Germany, Greece, Spain, France, Italy, Cyprus, Luxembourg, Malta, Austria, Portugal, Slovakia, Norway and Turkey) and voluntary in the other 20 countries.

2.3   Reference period

The EU-LFS is designed as a continuous quarterly survey with interviews spread uniformly over all weeks of a quarter. Each reference week starts on a Monday and ends on a Sunday. The first week of a year or quarter is defined as the week that includes the first Thursday of the year or the quarter. All participating countries conduct the EU-LFS as a continuous survey and produce quarterly and annual estimates [6].

2.4   Sampling designs

The sampling designs applied in the EU-LFS are very diverse. Most NSIs use some kind of multi-staged stratified random sample design, especially those that do not have central population registers available.

Bases used for the sample

The two main sources for the sampling frame are population registers and the latest population Census. Other sources include registers of dwellings or lists of addresses, e.g. from postal authorities or utility databases. Belgium, Italy, Lithuania, Luxembourg, Malta, Austria, Slovenia, Finland, Sweden, Iceland, Norway and Switzerland use population registers as the sole basis while the Netherlands complete this information with postal data, Denmark, Cyprus and Latvia with other registers and Estonia and Spain with Census information. Germany bases the sampling frame on the 2011 Census that is updated with information from the register of new dwellings. Bulgaria, Ireland, Greece, Croatia, Romania, Slovakia, Montenegro, North Macedonia and Serbia use information from the Census. Czechia draws the sampling frame from a register of Census areas and Portugal from a register of national dwellings based on the Census. Hungary works with a register of dwellings and Turkey uses the national address database. France uses the tax register for Metropolitan France and the annual population Census for the overseas departments. Poland uses a statistical sampling frame for social surveys based on information coming from administrative sources, regarding persons residing at a given address.

Sampling stages and primary sampling units (PSUs)

Denmark, Germany, Estonia, Cyprus, Lithuania, Luxembourg, Malta, Austria, Slovenia, Finland, Sweden, Iceland and Norway use a single stage sampling or single stage cluster sampling design. All other countries use a two stage sampling design, usually selecting municipalities, administrative districts or census enumeration areas in the first stage.

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[6]   Under Regulation (EC) No 577/98 a specific set of variables, referred to as structural variables, need to be surveyed only as annual averages with reference to 52 weeks rather than as quarterly averages (see section 2.8).

Final sampling units (FSUs)

Three types of FSUs are used: 1) households (Belgium, Bulgaria, Ireland, Italy, Cyprus, Lithuania, Malta, Slovenia, Norway, Montenegro, North Macedonia and Serbia) 2) dwellings/addresses (Czechia, Greece, Spain, France, Croatia, Latvia, Hungary, the Netherlands, Austria, Poland, Portugal, Romania, Slovakia and Turkey) and 3) persons. Germany samples clusters of dwelling units. In samples of dwellings or addresses, usually all persons and thus all households residing within the dwelling/address are interviewed. When persons constitute the PSU, the selected persons either build the final sample (Denmark, Finland, Sweden, Iceland and Switzerland) or the sampled persons lead to a final sample comprised of the sampling units and their household members (Estonia and Luxembourg).

Overall sampling rate

For all participating countries, the theoretical sampling rate (in percentage of the FSU) per quarter of the EU-LFS is 0.37% (EU: 0.38%). Iceland (1.95%) has the highest sampling rate per quarter followed by Luxembourg (1.60%) and Malta (1.54%), while most other participating countries have sampling rates of 1% or less. On average, the achieved quarterly sample in 2020 in all participating countries is 1.454 million individuals (EU: 1.196 million), of which 1.110 million are in the age group 15–74 years (EU: 0.911 million). The achieved sample in the EU-LFS is thus approximately 0.27% of the total population.

Stratification

All countries, except Lithuania, Luxembourg, Malta and Iceland, stratify the sample frame prior to the sampling. All of those countries, except Denmark, use the region (either at NUTS2, NUTS3 and LAU [7] level or based on nationally defined areas) as a stratification variable. Furthermore, the degree of urbanisation or the classification in 'urban/rural area' is frequently used. Other stratification variables concerning information about the characteristics (size, type) of the PSUs are also considered in some countries.

2.5   Rotation schemes

All participating countries use a rotating panel design for the samples. The number of panels (waves) ranges from four to eight. All panel designs include an overlap between one quarter and the successive one. The most common panel design with a quarterly overlap in 2020, adopted by 17 participating countries, is the '2-(2)-2', where sampled units are interviewed for two consecutive quarters, than stay out of the sample for the next two quarters and are included again two more times afterwards. Other widespread rotation patterns are in for five or six waves, used both in six countries, where each panel is interviewed consecutively for five or six quarters before permanently leaving the sample. Three other rotation schemes are used by one or maximum two countries.

Depending on national priorities with regard to the desired precision of change estimates, levels or annual averages, the number of waves and skip patterns lead to different percentages of overlapping populations between two successive quarters or between the same quarters in two successive years. All panel designs result in an overlap of 50% or more ([8]) of the sample between two successive

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quarters. There is less emphasis on the overlap between corresponding quarters in two successive years. Seven countries have an overlap of 20% while most other countries have an overlap ranging from 33% to 50%.

2.6 Calculation of weighting factors

Council Regulation (EC) No 577/98 on the EU-LFS stipulates that weighting factors should take into account 'in particular the probability of selection and external data relating to the distribution of the population being surveyed, by sex, age (five-year age groups) and region (NUTS2 level), where such external data are held to be sufficiently reliable by the Member States concerned' (Article 3(5)).

The methods of calculating the weights differ considerably between countries. The two main methods used, depending on the detail of the external information and whether or not this external information can be cross-tabulated, are post-stratification and calibration. Within the post-stratification, the inverse of the selection probabilities is adjusted a posteriori to the population's distribution by sex, age groups and other external (administrative) sources. Calibration is done with different variations of adjusting to marginal totals. Most of the countries adjust for non-response either directly in the weighting process or in a preliminary step before adjusting the weights to external sources.

Due to the complexity and number of factors taken into account in some of the weighting calculations, the requirement of the regulation to use five-year age groups is not implemented in all countries. Almost all countries adjust the weighting factors on regional levels. However, these regions may not necessarily correspond to the NUTS2 regional classification.

All countries use data on sex in the weighting process. Almost all countries use five-year age groups, for people aged between 15 and 74, in calculating the weighting factors. Exceptions are Germany, Greece, Slovenia and Montenegro that use broader age groups than the five-year ones [9]. All countries, except Germany, that have NUTS2 regions defined, use at least NUTS2 regions for calculating the weights, but twenty-four countries (Bulgaria, Czechia, Estonia, Ireland, Spain, Croatia, Italy, Cyprus, Latvia, Lithuania, Hungary, Malta, the Netherlands, Portugal, Slovenia, Slovakia, Finland, Sweden, Norway, Switzerland, Montenegro, North Macedonia, Serbia and Turkey) use a more detailed regional classification (NUTS3 or LAU).

Denmark, Germany, Latvia, Malta, the Netherlands, Austria, Finland, Sweden, Norway and Switzerland use register statistics on employment and/or unemployment in their weighting procedure. In other countries, different external distributions or sources are frequently used for both weighting and stratification, such as urban/rural distinction, nationality, ethnicity and size classes of regions or local areas. Nevertheless, no countries directly calibrate a variable determining the International Labour Organisation (ILO) labour force status to match non-demographic administrative data. In that respect, the current use of non-demographic administrative data in the production process of the EU-LFS, and in particular in the calibration and weighting steps, does not affect the correct survey measurement of the ILO labour force status.

Sixteen countries (Czechia, Denmark, Estonia, Ireland, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden, Iceland, Norway, Switzerland, Serbia and Turkey) gross the sample to the total population, i.e. including people living in institutional households even though some of them do not cover all of the institutional population in data collection (Czechia, Ireland, Poland, Slovenia, Switzerland, Serbia and Turkey) or only partially (Portugal, Romania and Slovakia).

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[9]   Czechia, Denmark, Spain, Luxembourg, Poland and Turkey use the five-year age groups up to the 60–64 years old.

2.7 Data collection methods

The EU-LFS data collection is carried out mainly through four modes: personal visits via CAPI or PAPI, telephone interviews, web interviews and self-administered questionnaires.

Most countries conduct the interview only with computerised questionnaires. Seven countries (Czechia, Germany, Greece, Malta, Poland, Romania and Slovakia) use both computerised and paper questionnaires. Only Montenegro solely relies on paper questionnaires (PAPI).

As described above, all countries interview responding units several times: about half of the countries (Czechia, Estonia, Ireland, Spain, France, Croatia, Italy, Cyprus, Latvia, Hungary, Austria, Poland, Portugal, Slovenia, Slovakia, North Macedonia, Serbia and Turkey) conduct the first interview always or mainly via CAPI while in subsequent waves the interviews are performed by CATI, if a telephone contact is available. Belgium, Denmark, Germany, Latvia, Lithuania, Luxembourg and the Netherlands use computer assisted web interviews (CAWI) in combination with other methods. Four countries (Sweden, Iceland, Norway and Switzerland) rely solely on telephone interviews. Three countries (Greece, Romania and Montenegro) collect data using only face-to-face interviews. Germany collects data using a combination of all techniques (CAPI, CATI, PAPI and CAWI).

As a consequence of the COVID-19 outbreak, the LFS data collections in 2020 have been severely hampered in most countries. During the containment, face-to-face (CAPI and PAPI) data collection methods have been stopped and replaced as much as possible by remote collection methods (CATI or CAWI).

Table 2.1 reports the distribution of interviews by technique used for data collection in all participating countries. CATI remains the predominant data collection mode (even more due to the COVID pandemic) with 61.2% of interviews in 2020.

Table 2.1: EU-LFS interviews by mode of data collection in the participating countries, 2018 – 2020 [a]
(% of interviews)

Data collection technique	2020	2019	2018
CAPI	19.5	36.7	35.1
CATI	61.2	45.9	46.9
PAPI	10.6	13.1	14.1
CAWI	7.4	3.9	3.6
Other (postal, self-administered)	1.4	0.4	0.3
Total	100.0	100.0	100.0

[a] Data for Lithuania is not available.

2.8 Use of subsamples to survey structural variables

In 2020, twelve countries (Belgium, Bulgaria, Czechia, Germany, Spain, France, Latvia, Luxembourg, the Netherlands, Finland, Norway and Switzerland) used a subsample to survey all or some of the 39 structural variables, taking advantage of the option offered by Regulation (EC) No 2257/2003. The subsample coincides with one rotation panel in the total sample, except for Luxembourg and Norway, which used both the first and the last survey waves, Germany, that used the first, third and fourth waves and Switzerland, which used the first and the third waves.

Regulation (EC) No 377/2008 stipulates that the estimates produced from the yearly subsample should be consistent with those obtained as annual averages of the full quarterly samples, at least as regards the ILO labour force status broken down by sex and 10-year age groups. This requirement aims to ensure the consistency of the main indicators (e.g. the employment or the unemployment rates) and their breakdowns produced from the two different databases.

3 Relevance

3.1 Definition

Relevance is the degree to which statistical information meet current and potential needs of the users.

Relevance reflects on whether all required statistics are produced and to what extent the concepts used (definitions, classifications etc.) reflect user needs. It can be assessed by analysing different users, e.g. who they are, what needs they have and whether they are satisfied.

Most EU statistics are compiled according to regulations containing a defined list of variables, which reflects, in particular, the most relevant institutional users' needs. If certain variables required by the regulation are not covered, the statistics are incomplete. Hence, lack of completeness affects the relevance of the statistics provided.

3.2 The users

Eurostat carries out a general User Satisfaction Survey every year to collect feedback on the quality of the statistics [10]. The survey primarily addresses registered Eurostat users who are generally students, academics, private users and affiliates of businesses, governments or international organisations. According to the results of the 2020 User Satisfaction Survey, 76.0% of the users rate the statistics on Labour market provided by Eurostat as 'very good or good'.

In 2011, Eurostat carried out an EU-LFS Rolling Review through its Quality Assurance Framework, which included a user survey. Most users stressed the importance of the EU-LFS data. The European Commission and its agencies as well as international organisations acknowledged the results as essential. The EU-LFS data is equally important or even essential for users from universities, research institutes and businesses.

The instrument of ad hoc modules has proven to be useful and flexible regarding major topics of interest that the standard EU-LFS does not cover.

Some users desire more timely data releases, at least for few main indicators. However, users appreciate the availability of a release calendar for the main indicators produced by the EU-LFS, even with conservative delays.

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[10]   See https://ec.europa.eu/eurostat/web/quality/general-evaluation-results

3.3 Completeness

All Member States of the EU provide quarterly and annual results.

Although adhering to the EU regulations on the EU-LFS, countries do not always provide data for all variables. Reasons can be e.g. the (temporary) inability to implement a variable in the national questionnaire or because of insufficient time for testing a required change.

Furthermore, it is compliant to collect and transmit structural variables only in an annual sub-sample (see section 2.8). Household data is yet another special case. In line with the provisions of the Council Regulation (EC) No 577/98, Denmark, Luxembourg, Finland and Sweden provide data for complete households only for an annual sub-sample of their standard sample of individuals. Data for Iceland, Norway and Switzerland is not available as a general derogation in that respect.

Tables 3.1 and 3.2 below summarise the completeness of the data. A more detailed analysis, by country and by variable, is provided in the Annex.

Table 3.1: Completeness of the EU-LFS variables for the EU and all participating countries, 2018 – 2020

| Number of compulsory variables with 100 % item non-response (a) | Number of participating countries | | | | | |
| | 2020 | | 2019 | | 2018 | |
	All	*EU*	All	*EU*	All	*EU*
0	15	*14*	16	*15*	17	*14*
1-4	15	*11*	16	*11*	16	*12*
5-9	4	*2*	3	*1*	2	*1*
10+	0	*0*	0	*0*	0	*0*
Total	34	*27*	35	*27*	35	*27*

(a) The variable INCDECIL is not included as it may be sent to Eurostat within twenty-one months after the end of the reference period.

In 2020, almost half of the participating countries gathered and transmitted data for all compulsory variables of the EU-LFS. By contrast, 16 countries provided datasets with one up to four variables completely missing, while further three countries transmitted data files having five to nine missing variables. Considering the development over the last few years, the status of completeness seems to be rather consistent over time.

As shown in Table 3.2, missing observations are not completely random in the EU-LFS datasets. Certain variables are more often not measured (or have a constant value) in the countries than others. In particular, certain reasons for not searching for a job (e.g. 'Looked for land, premises or equipment', 'Looked for permits, licenses, financial resources' or 'Awaiting the results of a competition for recruitment to the public sector') are not asked by nearly half of the participating countries, while most of the other variables are used in the questionnaire by nearly all countries.

Table 3.2: **Compulsory EU-LFS variables having one or more countries with 100% item non-response or a constant value [a], 2020**

Variable name [b]	Brief description	Number of countries	
		All	*EU*
NATIONAL	Nationality	1	*0*
PROXY	Nature of participation in the survey	1	*0*
SIGNISAL	Continuing receipt of the wage or salary	4	*3*
COUNTRYW	Country of place of work	3	*1*
TEMPAGCY	Contract with a temporary employment agency	3	*1*
HWOVERP	Paid overtime in the reference week in the main job	1	*0*
HWOVERPU	Unpaid overtime in the reference week in the main job	3	*0*
HWWISH	Number of hours that the person would like to work in total	1	*0*
NACEPR2D	Economic activity of the local unit in which person last worked	1	*0*
ISCOPR3D	Occupation of last job	1	*0*
SEEKREAS	Reasons for not searching an employment	1	*1*
SEEKTYPE	Type of employment sought	1	*1*
METHODA	Contacted public employment to find work	1	*0*
METHODB	Contacted private employment agency to find work	2	*1*
METHODE	Inserted or answered advertisements in newspapers or journals	2	*0*
METHODF	Studied advertisements in newspapers or journals	1	*0*
METHODG	Took a test, interview or examination	2	*0*
METHODH	Looked for land, premises or equipment	16	*12*
METHODI	Looked for permits, licenses, financial resources	14	*10*
METHODJ	Awaiting the results of an application for a job	6	*5*
METHODK	Waiting for a call from a public employment office	11	*9*
METHODL	Awaiting the results of a competition for recruitment to the public sector	20	*14*
METHODM	Other method used	9	*8*
AVAIREAS	Reasons for not being available to start working within 2 weeks	2	*2*
PRESEEK	Situation immediately before person started to seek employment (or was waiting for new job to start)	1	*0*
REGISTER	Registration at a public employment office	4	*2*
COURLEN	Number of hours spent on all taught learning activities within the last four weeks	1	*0*
COURFILD	Field of the most recent taught-learning activity	1	*1*
WSTAT1Y	Situation with regard to activity one year before survey	1	*1*
COUNTR1Y	Country of residence one year before survey	3	*2*
REGION1Y	Region of residence (within Member State) one year before survey	2	*1*
DEGURBA	Degree of urbanisation	2	*0*
HATVOC	Orientation of the completed level	1	*0*
EDUCLEVL	Level of this education or training	1	*0*
EDUCVOC	Orientation of education	1	*0*

(a) Excluding variables which are constant by default such as country, reference year, region (if NUTS2 is the whole country). The variable INCDECIL is not included as it may be sent to Eurostat within twenty-one months after the end of the reference period.

(b) According to Commission Regulation (EC) No 377/2008.

4 | Accuracy

4.1 Definition

Accuracy of data is the closeness of computations or estimates to the exact or true values that the statistics were intended to measure.

Statistics can be different from the true values because of random variability (the statistics change from one to another implementation of the survey due to random effects) and/or bias (the average of possible values of the statistics is different from the true value due to systematic effects).

Several types of error, stemming from all survey processes, contribute to the error of the statistics (bias and variance). A certain typology of errors is widely adopted in statistics. Sampling errors affect only surveys using samples. Errors occur due to the fact that only a subset of the population, that is usually randomly selected, is surveyed. Non-sampling errors affect sample surveys and complete enumerations alike and include coverage errors, measurement errors, non-response errors and processing errors [11].

4.2 Sampling errors

Sampling errors only affect sample surveys and occur because not all units of the frame population are surveyed. The frame defines and enables to access population units, such as lists of households with addresses. The sampling frame is the reference list(s) from which the sample (e.g. individuals, households, addresses or dwellings) is drawn. Official representative quantitative surveys, like the EU-LFS, generally use probability sampling. This makes it possible to quantify sampling errors, which can be expressed in terms of confidence intervals. Tables 4.1a and 4.1b provide the estimates and 95% confidence limits for the 2020 annual results for seven main indicators in all participating countries in the EU-LFS. For example, with a 95% probability, the true value of employed persons (aged 20 – 64 years) in Spain is somewhere between 18 748 000 and 18 954 000 people. The actual employment rate for the Spanish citizens aged 20 to 64 years old is, again with a 95% probability, between 65.3% and 66.1%. Of all people aged 20 to 64 in Denmark, about 521 000 up to 537 000 people are employed part-time and the average actual working time for all working people is 35.4 hours per week.

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[11] For more details about sampling and non-sampling errors, please see 'ESS handbook for Quality Reports', available at: https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/ks-gq-19-006

Table 4.1a: Confidence limits (a) **for employment calculations, annual average for 2020 (age group 20-64)**

	Number of employed (x1000)	Employment rate as a percentage of the population	Number of part-time employed persons (x1000)	Average actual hours of work per week (b)
Belgium	4 687 ±25	70.0 ±0.4	1 118 ±20	36.0 ±0.2
Bulgaria	3 015 ±70	73.4 ±1.7	54 ± 8	39.5 ±0.1
Czechia	5 066 ±27	79.7 ±0.9	284 ±14	38.2 ±0.1
Denmark	2 618 ± 8	77.8 ±0.2	529 ± 8	35.4 ±0.1
Germany	39 523 ± 77	80.0 ±0.1	10 939 ±62	34.7 ±0.1
Estonia	606 ± 9	78.2 ±0.8	72 ± 5	37.6 ±0.2
Ireland	2 150 ±13	73.4 ±0.4	362 ± 8	36.9 ±0.1
Greece	3 766 ±78	61.1 ±0.7	319 ±20	40.3 ±0.2
Spain	18 851 ±103	65.7 ±0.4	2 572 ±63	36.7 ±0.1
Croatia	1 618 ±73	66.9 ±1.1	73 ± 9	38.3 ±0.2
Italy	22 129 ±87	62.6 ±0.2	4 013 ±63	35.9 ±0.1
Cyprus	402 ± 5	74.9 ±0.9	40 ± 3	38.0 ±0.3
Latvia	848 ± 5	77.0 ±0.5	74 ± 5	38.4 ±0.2
Lithuania	1 290 ±39	76.7 ±1.3	78 ±10	38.6 ±0.5
Luxembourg	287 ± 7	72.1 ±1.1	51 ± 3	37.4 ±0.4
Hungary	4 352 ±21	75.0 ±0.4	208 ± 9	38.2 ±0.1
Malta	252 ± 3	77.3 ±1.0	27 ± 2	38.4 ±0.5
Netherlands	8 101 ±22	80.0 ±0.2	3 860 ±28	33.3 ±0.0
Austria	4 090 ±15	75.5 ±0.3	1 129 ±19	34.4 ±0.2
Poland	15 978 ±88	73.6 ±0.4	913 ±45	39.3 ±0.1
Portugal	4 529 ±37	74.7 ±0.6	329 ±21	37.9 ±0.9
Romania	8 196 ±172	70.8 ±0.9	460 ±43	39.1 ±0.2
Slovenia	959 ±15	75.6 ±0.7	77 ± 4	39.3 ±0.2
Slovakia	2 483 ±22	72.5 ±0.6	111 ± 7	38.5 ±0.1
Finland	2 381 ±13	76.5 ±0.4	318 ± 9	36.5 ±0.2
Sweden	4 740 ±20	80.8 ±0.3	992 ±21	35.7 ±0.1
Norway	2 504 ±10	78.8 ±0.3	582 ±12	34.6 ±0.2
Switzerland	4 320 ±19	82.5 ±0.4	1 701 ±23	36.2 ±0.2
Montenegro	211 ± 5	55.3 ±1.0	8 ± 1	42.9 ±0.5
North Macedonia	778 ±30	59.1 ±2.2	28 ± 2	39.5 ±0.4
Serbia	2 705 ±21	65.9 ±0.5	238 ±11	42.8 ±0.2
Turkey	24 941 ±285	51.0 ±0.3	2 761 ±54	43.4 ±0.2

Notes: There are no estimates for France, because of the introduction of a new subsample, and Iceland.

(a) The confidence limits are at a 95% level of significance.

(b) By people who worked at least one hour in the reference week. The hours are calculated as the sum of actual hours in the main and second job.

Table 4.1b shows the confidence intervals for unemployment in all the participating countries in the EU-LFS. For example, in the Netherlands, with a probability of 95%, the true value of unemployed persons (aged 15 – 74 years) is between 346 000 and 368 000 people, and the unemployment rate is between 3.7 to 3.9%. In Slovenia instead, the true value for the unemployment rate for young people aged 15 to 24 years is between 11.7 and 16.7%.

Table 4.1b: Confidence limits (a) for unemployment calculations, annual average for 2020 (age group 15-74)

	Number of unemployed persons (x1000)	Unemployment rate as a percentage of labour force	Youth unemployment rate as a percentage of labour force (age group 15-24)
Belgium	282 ±11	5.6 ±0.3	15.3 ±1.4
Bulgaria	169 ±14	5.1 ±0.4	14.2 ±2.2
Czechia	137 ± 9	2.6 ±0.2	8.0 ±1.1
Denmark	170 ± 5	5.6 ±0.2	11.6 ±0.7
Germany	1 658 ±30	3.8 ±0.1	7.0 ±0.1
Estonia	48 ± 4	7.0 ±0.5	18.5 ±2.8
Ireland	137 ± 6	5.6 ±0.2	15.3 ±0.9
Greece	755 ±32	16.3 ±0.6	35.0 ±3.1
Spain	3 531 ±96	15.5 ±0.4	38.3 ±1.4
Croatia	135 ±13	7.5 ±0.7	21.1 ±3.3
Italy	2 310 ±46	9.2 ±0.2	29.4 ±1.1
Cyprus	34 ± 3	7.6 ±0.6	18.2 ±3.1
Latvia	79 ± 4	8.1 ±0.4	14.9 ±2.7
Lithuania	126 ±14	8.5 ±0.9	19.6 ±5.5
Luxembourg	21 ± 2	6.8 ±0.7	23.2 ±4.9
Hungary	198 ± 9	4.3 ±0.2	12.8 ±1.0
Malta	12 ± 2	4.4 ±0.6	10.9 ±2.6
Netherlands	357 ±11	3.8 ±0.1	9.1 ±0.3
Austria	243 ± 8	5.4 ±0.2	10.5 ±0.9
Poland	537 ±27	3.2 ±0.2	10.8 ±1.1
Portugal	351 ±19	6.8 ±0.4	22.6 ±3.0
Romania	452 ±32	5.0 ±0.5	17.3 ±2.6
Slovenia	51 ± 4	5.0 ±0.4	14.2 ±2.5
Slovakia	181 ± 8	6.7 ±0.3	19.4 ±1.9
Finland	213 ± 7	7.8 ±0.2	21.4 ±1.2
Sweden	458 ±12	8.3 ±0.2	24.0 ±1.2
Norway	125 ± 5	4.4 ±0.2	11.3 ±0.7
Switzerland	238 ±11	4.8 ±0.2	8.6 ±0.8
Montenegro	48 ± 3	17.9 ±1.0	36.0 ±3.9
North Macedonia	156 ±13	16.4 ±1.1	35.7 ±3.8
Serbia	287 ±12	9.0 ±0.4	26.7 ±2.0
Turkey	4 045 ±79	13.1 ±0.3	25.1 ±0.7

Notes: There are no estimates for France, because of the introduction of a new subsample, and Iceland.

(a) The confidence limits are at a 95% level of significance.

4.3 Non-sampling errors

Coverage errors

A coverage error (or frame error) is due to a divergence between the survey population and the target population resulting from an imperfect (list of units from which the sample is selected). Possible error types are:

- Under-coverage, in which case the frame population does not include all units of the target population.

- Over-coverage, in which case the frame population includes units that do not belong to the target population.

- Misclassification, in which case some units of the frame population that belong to the target population are wrongly classified.

Whereas under-coverage is often the most serious problem, it is also the most difficult to quantify, and then is often reported in qualitative terms only. On the other hand, over-coverage is often revealed in the sampling process, for example when a first contact with a sampling unit fails because it is no longer alive or active.

Table 4.2 summarises the information on coverage errors given by the EU-LFS participating countries. Italy is the only country that reported the presence of all three types of coverage errors in the 2020 EU-LFS, while both under-coverage and over-coverage were reported by Greece, Spain, Croatia, Malta, Poland, Portugal, Romania, Slovakia and Sweden. For more details, see Table 10.1 in the Annex.

Table 4.2: Evaluation of coverage errors, 2020

	Under-coverage	Over-coverage	Misclassification
Belgium	Y	N	N
Bulgaria	-	Y	-
Czechia	-	N	-
Denmark	-	-	-
Germany	-	-	-
Estonia	Y	N	N
Ireland	-	-	-
Greece	Y	Y	-
Spain	Y	Y	N
France	N	N	N
Croatia	Y	Y	-
Italy	Y	Y	Y
Cyprus	Y	N	-
Latvia	-	Y	-
Lithuania	-	Y	-
Luxembourg	N	N	-
Hungary	-	Y	-
Malta	Y	Y	-
Netherlands	-	-	-
Austria	Y	-	-
Poland	Y	Y	-

Portugal	Y	Y	-
Romania	Y	Y	-
Slovenia	N	Y	N
Slovakia	Y	Y	N
Finland	N	Y	-
Sweden	Y	Y	N
Iceland	N	N	N
Norway	Y	N	Y
Switzerland	N	N	N
Montenegro	-	Y	-
North Macedonia	-	Y	-
Serbia	-	Y	-
Turkey	-	-	-

Notes: (Y) Indicates the presence of a coverage error.

(N) Indicates that there is no coverage error or it is negligible.

(-) Indicates that the country has not been able to provide the information or does not know.

Measurement errors

Measurement errors are mistakes that occur during the process of data collection and cause the recorded values of variables (estimates from the sample) to be different from the true values (of the target population). Measurement errors may cause both bias (systematic errors) and an increase of the variance (unsystematic errors) of the estimates from the dataset.

Measurement errors are commonly categorized and grouped by the following causes:

- Survey instrument: The form, questionnaire or measuring device used for the data collection may lead to the recording of wrong values.

- Respondent: Respondents may give erroneous information, deliberately or unconsciously.

- Interviewer (if present): In interviewer-administered surveys, interviewers may influence the answers given by respondents, deliberately or unconsciously.

- Situation: The interview context (e.g. time, place, people present) may influence the answers given by respondents.

For the EU-LFS, the level of proxy interviews can be used as an indicator for at least part of the measurement error, representing the influence of the respondent. Proxy interviews are interviews where a person (the proxy) answers questions on behalf of someone else. The proxy is generally a household member of the person from whom the information is being sought.

Table 4.3: Share of proxy interviews (people aged 15-74), 2016 - 2020

	2020	2019	2018	2017	2016
EU	**34.0**	**33.6**	**33.1**	**32.8**	**29.5**
Belgium	27.6	26.1	27.0	25.7	17.8
Bulgaria	27.0	28.5	30.0	28.3	33.0
Czechia	42.1	41.7	43.0	43.2	42.3
Denmark	6.9	8.2	6.7	6.4	5.0
Germany	21.0	23.8	23.2	25.1	23.9
Estonia	23.4	17.0	16.3	36.1	36.8
Ireland	48.5	47.1	46.8	48.7	50.2
Greece	39.3	38.5	39.6	40.4	41.1
Spain [(a)]	50.0	50.3	50.2	51.5	51.8
France	27.1	26.9	27.1	27.3	26.6
Croatia	51.2	50.1	51.5	51.7	52.3
Italy	32.9	34.9	33.1	26.7	20.3
Cyprus	39.5	38.2	38.1	35.9	34.5
Latvia	40.2	36.2	38.1	38.4	39.7
Lithuania	32.0	34.8	36.1	33.0	35.8
Luxembourg	26.5	26.5	26.4	34.0	41.8
Hungary	41.6	40.9	41.6	42.2	42.6
Malta	44.7	44.7	47.4	47.4	48.3
Netherlands	43.5	44.9	45.0	45.4	45.5
Austria	22.3	25.4	27.9	24.4	24.3
Poland	40.1	36.2	36.5	37.6	37.2
Portugal	50.3	49.0	48.2	48.1	48.3
Romania	19.6	17.5	19.4	20.8	22.2
Slovenia	54.2	52.8	54.2	53.3	49.7
Slovakia	52.1	51.3	51.1	51.6	51.1
Finland	3.9	4.1	3.9	4.0	4.1
Sweden	2.0	2.1	2.8	2.6	3.1
Iceland [(a)]	0.5	0.7	0.8	0.8	0.8
Norway	11.8	14.6	17.3	17.0	17.2
Switzerland	2.1	2.4	2.7	2.8	3.0
Montenegro [(b)]	43.3	39.7	39.4	39.0	-
North Macedonia	55.3	53.1	53.8	52.8	50.8
Serbia [(c)]	48.9	51.3	53.1	-	-
Turkey	12.1	10.6	10.3	9.6	11.6

Notes: Unweighted data.

(a) Respondents aged 16–74 years.

(b) Information for Montenegro before 2017 is not available.

(c) Information for Serbia before 2018 is not available.

Table 4.3 shows the reported information related to measurement errors, as the number of proxy interviews and their development in recent years. At EU level, the proxy rate slightly increased to 34.0% in 2020 from 33.6% in 2019, following the trend observed over the previous years. However, substantial differences can be observed across countries. Between 2019 and 2020, the proxy rate decreased in 15 countries, with drops ranging from 0.1 up to 3.1 percentage points, and it increased in 18 countries, with rises varying from 0.3 up to 6.4 percentage points.

In 2020, the proxy rate exceeded 50% of the interviews in six countries (Spain, Croatia, Portugal, Slovenia, Slovakia, and North Macedonia) while in nine other countries it was higher than 40% (Czechia, Ireland, Latvia, Hungary, Malta, the Netherlands, Poland, Montenegro and Serbia). In contrast, five countries (Denmark, Finland, Sweden, Iceland and Switzerland) had a proxy rate under 10%. In these countries, the sampling unit is the individual and the necessity to directly contact the selected person in the sample leads to a lower proxy rate.

Table 4.4 shows the main procedures adopted by the countries to reduce measurement errors. Almost all countries provide training to the interviewers on the contents and possible changes compared to the previous round of the survey (31 countries) and send an introduction letter for the survey to the selected units in advance (32 countries). Phone calls to select a date or to introduce the survey (15 countries) or a monitoring of the survey by listening to the interviews (19 countries) are less common, but still used by approximately half of the participating countries. For more detailed information about the procedures used in each country, see Table 10.2 in the Annex.

Table 4.4: Procedures used to reduce measurement errors, 2020

Procedures	Number of participating countries	
	All	*EU*
Respondent		
Letter introducing the survey	32	*26*
Phone call to select a date or introduce the survey	15	*14*
Interviewer		
Periodical training (at least one time per year)	31	*25*
Feedbacks from the interviewer (reports, debriefings, etc.)	30	*24*
Fieldwork		
Monitoring by directly contacting the respondents	23	*19*
Monitoring by directly listening interviews	19	*15*
Monitoring by using indicators on the data collection and performance of the interviewers	22	*19*
Questionnaire		
Questionnaire in different languages	21	*18*
Consistency checks during the interview [a]	30	*25*

[a] In Bulgaria and Montenegro this is not applicable because they only use PAPI for the data collection.

Non-response errors

Non-response errors occur when the survey fails to get a response to one, or possibly all, of the questions.

Non-response encompasses a wide variety of reasons for missing values in the data: e.g. respondents might be impossible to contact, not at home, unable, incapable or refuse to answer or they do not return the questionnaire personally. Non-response could lead to a reduction of the actual sample size and consequently to an increase of the variance of the estimates (unsystematic error). Furthermore, this can lead to a bias (systematic error), if the non-respondents have different characteristics regarding the survey variables from the respondents.

There are two types of non-response:

- Unit non-response, which occurs when no data are collected from a unit in the sample;

- Item non-response that occurs when values for some but not all survey data items (variables) are obtained from a unit.

This section only covers the issue of unit non-response while item non-response is presented in Chapter 3 (Table 3.2) and in detail for each individual country in the Annex (Table 10.3).

Table 4.5 shows the unit non-response rates by country. Please note that these rates are not fully comparable across countries, as the calculation of the non-response is not based on the household unit for all countries. Indeed, Denmark, Estonia, Luxembourg, Finland, Sweden, Iceland, Norway and Switzerland compute non-response at an individual level.

In the last five years, the EU-LFS data has been affected by a slight increase of the unit non-response rate. From 2019 to 2020, the unit non-response rate sharply increased in most countries due to the lockdown measures adopted by most Member States to cope with the COVID-19 pandemic. In particular, it increased (from 0.3 up to 41.0 percentage points) in 25 countries and decreased (from -0.7 up to -11.9 percentage points) in eight countries.

Table 4.5: Unit non-response rates, 2016 - 2020

	2020	2019	2018	2017	2016
Belgium	18.6	15.5	19.0	17.4	28.4
Bulgaria	27.4	20.3	20.0	19.7	20.3
Czechia	26.2	21.9	22.4	21.2	20.2
Denmark	46.0	44.3	43	45.0	52.0
Germany	46.8	5.8	3.4	3.8	2.6
Estonia	28.2	27.1	28.1	33.2	30.2
Ireland	57.9	51.0	36.7	32.2	27.3
Greece	35.5	28.8	26.8	25.4	25.5
Spain	15.3	16.1	15.6	13.1	12.6
France	27.2	20.8	20.3	20.4	19.3
Croatia	43.0	43.7	42.4	44.5	38.6
Italy	20.2	17.0	14.4	14.9	13.3
Cyprus	6.0	4.7	4.3	3.8	4.3
Latvia	41.6	35.2	34.8	35.4	38.0
Lithuania	22.5	22.2	21.6	22.3	21.3
Luxembourg	37.2	39.1	44.4	41.7	47.5
Hungary	35.3	26.9	24.5	21.5	19.3
Malta	34.6	33.3	27.8	24.8	23.1
Netherlands	52.5	50.7	49.4	48.4	47.0
Austria	5.4	6.1	7.1	3.4	5.3
Poland	33.9	45.9	42.2	38.7	37.6
Portugal	38.3	18.9	16.4	16.1	15.8
Romania	15.3	12.5	12.3	12.7	13.3
Slovenia	42.2	22.3	21.3	20.1	21.4
Slovakia	20.1	18.5	17.6	18.0	15.2
Finland	40.7	37.3	34.5	32.7	30.4
Sweden	49.0	49.8	47.2	43.4	43.0
Iceland	-	38.1	0.0	31.5	26.8
Norway	14.7	16.3	15.7	15.8	18.4
Switzerland	21.2	22.2	20.3	19.7	19.2
Montenegro	22.2	20.7	20.2	16.7	16.6
North Macedonia	16.1	15.8	11.7	11.9	15.6
Serbia	29.5	25.0	21.5	20.9	20.0
Turkey	5.5	4.9	4.6	4.3	5.3

Notes: (-) indicates that the country does not know the information or has not been able to provide it.

Table 4.6: Non-response rate by category, 2020

	Total	*Refusals*	*Non-contacts*	*Other reasons*
Belgium	18.6	3.3	7.0	8.3
Bulgaria	27.4	4.0	21.9	1.6
Czechia	26.2	16.4	3.7	6.1
Denmark	46.0	6.0	36.0	4.0
Germany	46.8	-	-	-
Estonia	28.2	14.0	3.1	11.1
Ireland	57.9	5.8	33.8	18.3
Greece	35.5	10.0	13.5	12.0
Spain	15.3	4.1	10.8	0.4
France	27.2	3.8	14.1	9.3
Croatia	43.0	24.1	15.6	3.3
Italy	20.2	4.4	14.9	0.9
Cyprus	6.0	2.1	3.4	0.6
Latvia	41.6	9.1	21.8	10.7
Lithuania	22.5	7.0	15.1	0.4
Luxembourg	37.2	2.2	27.3	7.7
Hungary	35.3	8.3	25.8	1.2
Malta	34.6	2.7	32.0	0.0
Netherlands	52.5	37.2	12.2	3.1
Austria	5.4	1.8	0.7	2.9
Poland	33.9	14.5	11.3	8.1
Portugal	38.3	2.9	28.0	7.4
Romania	15.3	3.2	9.5	2.6
Slovenia	42.2	7.3	28.4	6.5
Slovakia	20.1	15.0	0.0	5.1
Finland	40.7	20.0	20.5	0.3
Sweden	49.0	16.0	31.2	1.8
Iceland	-	-	-	-
Norway	14.7	-	-	-
Switzerland	21.2	2.7	13.1	5.5
Montenegro	22.2	6.7	13.5	2.0
North Macedonia	16.1	6.3	5.0	4.8
Serbia	29.5	5.7	23.2	0.6
Turkey	5.5	0.6	4.1	0.8

Notes: (-) indicates that the country does not know the information or has not been able to provide it.

Table 4.6 shows the non-response rates observed in the 2020 EU-LFS for each country broken down by reason (refusal, non-contact or other). In most countries, non-response was due to the impossibility to contact the sampling unit or the respondent. By contrast, in Czechia, Estonia, Croatia, the Netherlands, Poland, Slovakia and the North Macedonia, most of the non-respondents refused to participate in the EU-LFS. In Belgium and Austria, non-response was mainly due to other reasons, as lost interviews due to technical issues, expired time for completing an interrupted interview, etc.

Processing errors

Before starting the data dissemination steps, the statistical analysis and the production of statistics for publication, the data collection and processing operations take place, with the data coding, data entry, data editing, imputation, etc. Mistakes occurring during these steps are called processing errors.

According to the information provided by the participating countries in the annual national quality reports, twenty countries adopted editing and correction procedures to EU-LFS data (Belgium, Bulgaria, Czechia, Denmark, Ireland, Greece, Spain, Croatia, Italy, Latvia, Lithuania, Malta, Austria, Portugal, Romania, Slovenia, Slovakia, Montenegro, North Macedonia and Serbia), but for most countries, the overall editing rate remains unclear. In their quality report fifteen countries also mention using data imputation to correct the non-response item (Belgium, Bulgaria, Estonia, Spain, France, Italy, Latvia, Lithuania, Hungary, Malta, Austria, Romania, Slovenia, Slovakia and Montenegro). However, imputation is mainly used for the INCDECIL variable, and in some countries for variables related to the job characteristics or education.

Due to the lack of detailed information, Eurostat cannot provide estimates on the degree of processing errors in the EU-LFS data.

5 Timeliness and punctuality

5.1 Definition

Timeliness is the length of time between data availability and the event or phenomenon the data describe.

Punctuality **represents the time lag between the actual delivery of the data and the target date when it should be delivered.**

According to the Council Regulation (EC) No 577/98, quarterly data shall be transmitted to Eurostat within twelve weeks from the end of a reference quarter. The EU-LFS release calendar schedules the dissemination of the EU-LFS main indicators around three weeks after the data delivery deadline. In addition, Eurostat continuously updates the Eurostat online database (other tables) whenever new data is available.

Table 5.1: Transmission to Eurostat and Eurostat's dissemination of EU-LFS data, 2018 - 2020 quarterly EU-LFS data

Number of calendar days from end of reference period	Number of countries					
	2020		**2019**		**2018**	
	All	*EU*	**All**	*EU*	**All**	*EU*
Transmission to Eurostat						
<31	0	*0*	1	*1*	1	*1*
31-60	10	*8*	11	*8*	11	*8*
61-90	22	*18*	23	*18*	23	*18*
91+	2	*1*	0	*0*	0	*0*
Total	34	*27*	35	*27*	35	*27*
Average number of calendar days	68	*66*	65	*63*	63	*62*
Eurostat's dissemination of national data (website)						
<31	0	*0*	0	*0*	0	*0*
31-60	2	*2*	4	*4*	6	*5*
61-90	23	*19*	28	*22*	27	*22*
91+	9	*6*	3	*1*	2	*0*
Total	34	*27*	35	*27*	35	*27*
Average number of calendar days	79	*77*	77	*76*	76	*74*

Table 5.1 shows that most countries transmit data to Eurostat in the third month after the end of the quarter. Hence, Eurostat disseminates most national data in the third month after the end of the quarter as well. Timeliness and punctuality of the transmission to Eurostat and Eurostat's dissemination of national data remained stable in 2020 compared to the previous years.

6 Comparability

6.1 Definition

Comparability aims at measuring the impact of differences in applied statistical concepts, definitions, measurement tools and procedures on comparisons of statistics across geographical areas, non-geographical dimensions, and sectoral domains and over time.

6.2 Geographical comparability of concepts

A common framework regulation [12], common variable definitions [13], common explanatory notes [14] and a common regulation regarding the definition of unemployment and the twelve principles of questionnaire construction [15] serve to ensure the comparability of the statistics between the participating countries. However, this is primarily the case for the main characteristics of employment and unemployment, whereas particular definitions and sequences of questions are part of the EU legislation. For the other variables, each country has the responsibility to ensure that the national survey provides data compatible with the EU definitions and of the same quality as for the core variables.

As most of the variables are defined in accordance with recommendations of the International Labour Organisation and other international organisations, the main statistics from the EU-LFS are directly comparable to those of other industrialised countries, especially those of the other members of the Organisation for Economic Co-operation and Development (OECD). Table 6.1 shows the main divergences of the national concepts from the European framework reported by the countries.

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(12)   Council Regulation (EC) No 577/98.

(13)   Commission Regulation (EC) No 377/2008.

(14)   EU Labour Force Survey Explanatory Notes, available at: https://ec.europa.eu/eurostat/statistics-explained/index.php/title=EU_labour_force_survey_-_documentation#Explanatory_notes_and_user_guide_for_the_core_variables

(15)   Commission Regulation (EC) No 1897/2000.

Table 6.1: Divergence of national concepts from European concepts, 2020

	Divergences in the definition of the resident population
Belgium	The Registered population definition in the sampling frame is used. At the beginning of the interview, the interviewer checks with the respondent(s) whether the list of household members as taken from the sampling frame corresponds to the actual situation. Interviewers are instructed to drop household members that no longer live at the given address for at least 6 months (but in practice they sometimes drop household members earlier) and also to add new members in the household if any.
Denmark	The definition of the resident population in the Danish LFS is harmonised with the Danish population register. The permanent address is therefore defined as the place where you regularly sleep, when you are not abroad because of holidays, business trips, or the place where you have your belongings. The definition does therefore not explicitly include the minimum of 1 year, as stated in the Explanatory notes. This solution complies with art. 2(d) of EP and Council Regulation (EC) No 763/2008.
Austria	Prospective information (intention to stay at least one year) is not available.
Sweden	To belong to the Swedish resident population the residence permit is needed. This means that some immigrants group, i.e. persons with citizenship outside the EU, do not belong to the population even if they are staying or intended to stay in the country for a period longer than one year. These people cannot work or seek job by defaults and they do not exist in the populations register and thereby neither in the sample frame.
Norway	In the Norwegian register's definition a person is resident if he/she is staying or intends to stay 6 months or more in Norway.
	Divergences in the concept of employment
Croatia	The persons on sick leave, maternity or paternity leave, paid parental leave are always considered as employed, regardless of the length of the absence.
Hungary	According to the ILO recommendation drafted for countries in transition in Prague in November 1995, persons receiving child care allowance or child care benefit during parental leave have been classified since 1998 on the basis of their activity performed in the reference week. Therefore these persons are not classified as persons with a job from which he/she was absent during the reference week, if they are not working besides receiving childcare allowance or benefit. Questions about how long they have been out of his/her main job are skipped for these persons. In case of persons older than 74 'other' category (WSTATOR=5) cannot be used because we do not know whether they have a job or not.
Portugal	Persons who work on their own small agriculture farms and produce only for their own consumption are considered as employed if the output is considered important (by the household) for the household budget. Persons on compensation leave, sick leave, maternity or paternity leave, paid parental leave are always considered to be employed, regardless of the length of the absence.
Turkey	Three months absence criterion defined by Eurostat is not followed for unpaid family workers; they are not covered as employed if they did not work in the reference week even one hour. Farmers who only produce for own-consumption are considered as employed if the amount of this production is considerable within total household consumption (if the total amount of this product is at least 51% of total food expenditure).
	Divergences in the concept of unemployment
Belgium	In Belgium, unemployment rate is calculated for persons aged 15-64 and not 15-74.
Slovenia	There is a divergence in the unemployment concept. Nevertheless, the figures can be calculated in both ways (national and Eurostat approach). In general, the unemployment rate calculated by Eurostat and by the Slovenian statistical office differs for max. 0.1%.
Turkey	For national calculation of unemployment, passive job search methods are covered besides the active ones.

6.3 Comparability over time

Every year, a certain number of changes is introduced in some national LFSs, to take into account changes introduced at European level, to better align the national surveys to the already existing EU regulations or methodological guidelines, or to take into consideration national needs. These changes can concern conceptual aspects (i.e. concepts and definitions used by the EU-LFS, the survey coverage and the geographical boundaries, the target population, the legislation, the used classifications) or measurement aspects (i.e. the sampling strategy, the data collection and the weighting scheme). Table 6.2 shows the reported changes to the national labour force surveys introduced in 2020 by the participating countries [16]. Such changes may cause some limitations regarding the comparability of the data in the time series.

Table 6.2: Changes in the national LFSs in 2020 compared to previous year(s)

Changes to the survey concept (legislation, definitions, coverage and classifications)	
Germany	The microcensus law, from December 2016, regulates the new rotational scheme of the LFS starting in 2020 and the items of the LFS questionnaire – additionally to the other microcensus subsamples.
Changes to the sampling strategy (sampling frame, sample design, rotational pattern)	
Germany	Up until 2019 the LFS sample size was identical to the microcensus. Starting in 2020 the LFS is a 40% subsample of the microcensus. The LFS switched from a yearly rotation to a 2-(2)-2 schema, meaning that each sampling district will be interviewed in 2 subsequent quarters, pause for two quarters and then again be queried for other 2 quarters. Yearly variables are surveyed for each sampling district in the first and third wave and the fourth wave under the condition that the reference week is in Q1.
Changes to the data collection (questionnaire, national explanatory notes, survey mode)	
General	As a consequence of the COVID-19 outbreak, the LFS data collections have been severely hampered in most countries. During the lockdown periods, face-to-face (CAPI and PAPI) data collection methods have been stopped and replaced as much as possible by remote collection methods (CATI or CAWI). Non-response increased because phone numbers/mail addresses were not always immediately available. Wave 1, for which a face-to-face interview was mainly used before the COVID crisis, has been particularly affected.
Changes to the weighting scheme	
Bulgaria	The usual weighting procedure was applied. The only difference refers to the calculation of correction factor for non-response. Normally the correction factor is calculated for each strata and wave, without taking into account the reference month. In the first quarter of 2020 this factor was calculated separately for the first two months and for March (last 5 weeks of the quarter), when the non-response was higher. In the second quarter of 2020 this factor was calculated separately for each month of the quarter, as the non-response varied between months.
Germany	Due to the significant changes in the LFS design, the weighting procedure has also been subject to changes. As described in 3.1 yearly weights are no longer an average of the quarterly weights and are calculated with a differing weighting frame, while consistency with the extrapolation of key quarterly indicators (employment status) is taken into account. The new frames for quarterly and yearly weights are explained in detail in 3.1.
Poland	Since the third quarter of 2020, an additional calibration condition has been introduced taking into account the structure of the population by level of education. It was introduced in order to ensure comparability of the survey results with the previous periods.

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[16]   For a detailed overview of the availability of quarterly EU-LFS microdata and the uniform spreading of the sample over the whole year, please consult: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=EU_labour_force_survey_-_methodology

7 Coherence

7.1 Definition

Coherence indicates the adequacy of the statistics to be combined in different ways and for various uses.

The coherence of two or more statistical outputs refers to the degree to which the statistical processes, by which they were generated, used the same concepts – classifications, definitions and target populations – and harmonised methods. Coherent statistical outputs have the potential to be validly combined and used jointly. However, it is generally easier to show cases of incoherence than to prove coherence.

The following sections assess the coherence of the EU-LFS with similar data from other sources, the population statistics and the employment data from National Accounts and Structural Business Statistics. Other comparisons are possible as well, such as with employment data from the Labour Cost Survey.

7.2 Coherence with population statistics

The coherence with population statistics is of importance for the users, as often the most recent population estimates are available from the EU-LFS statistics. These two statistics are, however, not fully comparable.

Differences that need to be considered are:

- EU-LFS statistics usually cover the population in private households, while population statistics cover the whole population, including those living in collective households (e.g. conscripts).

- Sometimes the rules for defining the usual resident population in the EU-LFS differ from the rules in population statistics.

- Population statistics usually refer to particular dates, e.g. 1st January or mid-year for population level and characteristics. The EU-LFS statistics generally refer to the average quarterly or annual situation.

Most of the participating countries carried out a population census in 2011. New censuses often result in new weights, new sample frames or new sample designs. By 2014, all of the participating countries had revised the weights to reflect new population estimates, including the re-weighting of previous data series at least back to 2010. Table 7.1 shows the comparison between population statistics and the EU-LFS for people aged 15-64 years.

Table 7.1: Coherence between population statistics and EU-LFS for persons aged 15-64, 2020

	Population 15-64 (in thousands)			LFS annual average 15-64 (in thousands)			Relative difference		
	01/01/2020			2020			[(L-P)/P*100.0]		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
EU	**287,730**	**144,338**	**143,392**	**284,178**	**142,155**	**142,024**	**-1.2**	**-1.5**	**-1.0**
Belgium	7,376	3,714	3,661	7,326	3,679	3,647	-0.7	-1.0	-0.4
Bulgaria	4,445	2,251	2,195	4,417	2,233	2,184	-0.6	-0.8	-0.5
Czechia	6,852	3,498	3,354	6,838	3,492	3,347	-0.2	-0.2	-0.2
Denmark	3,714	1,875	1,838	3,700	1,867	1,832	-0.4	-0.4	-0.3
Germany	53,685	27,258	26,427	53,284	26,976	26,308	-0.7	-1.0	-0.4
Estonia	844	425	419	836	418	418	-1.0	-1.6	-0.3
Ireland	3,242	1,606	1,636	3,254	1,613	1,641	0.4	0.4	0.3
Greece	6,805	3,371	3,434	6,719	3,328	3,391	-1.3	-1.3	-1.2
Spain	31,188	15,628	15,561	31,110	15,557	15,552	-0.3	-0.5	-0.1
France	41,541	20,464	21,077	40,692	19,914	20,778	-2.0	-2.7	-1.4
Croatia	2,623	1,323	1,300	2,629	1,315	1,313	0.2	-0.6	1.1
Italy	38,055	19,030	19,025	38,261	19,082	19,179	0.5	0.3	0.8
Cyprus	601	295	306	579	281	298	-3.6	-4.8	-2.4
Latvia	1,211	594	617	1,190	581	609	-1.7	-2.2	-1.4
Lithuania	1,815	900	916	1,812	900	912	-0.2	0.0	-0.4
Luxembourg	435	223	213	431	220	212	-0.9	-1.3	-0.5
Hungary	6,406	3,210	3,196	6,280	3,135	3,145	-2.0	-2.3	-1.6
Malta	350	186	164	347	184	163	-1.0	-1.1	-0.9
Netherlands	11,289	5,679	5,610	11,160	5,604	5,557	-1.1	-1.3	-0.9
Austria	5,924	2,983	2,941	5,835	2,917	2,917	-1.5	-2.2	-0.8
Poland	25,179	12,609	12,570	23,372	11,687	11,685	-7.2	-7.3	-7.0
Portugal	6,619	3,193	3,425	6,603	3,178	3,426	-0.2	-0.5	0.0
Romania	12,636	6,423	6,213	12,611	6,405	6,206	-0.2	-0.3	-0.1
Slovenia	1,356	707	649	1,362	709	652	0.4	0.4	0.5
Slovakia	3,689	1,862	1,827	3,689	1,862	1,827	0.0	0.0	0.0
Finland	3,423	1,741	1,682	3,401	1,721	1,679	-0.7	-1.2	-0.1
Sweden	6,427	3,290	3,137	6,443	3,298	3,145	0.2	0.2	0.2
Iceland	243	127	117	230	119	111	-5.6	-6.0	-5.1
Norway	3,496	1,791	1,705	3,489	1,786	1,703	-0.2	-0.3	-0.1
Switzerland	5,705	2,886	2,820	5,653	2,855	2,797	-0.9	-1.1	-0.8
Montenegro	413	207	206	424	213	212	2.6	2.5	2.7
North Macedonia	1,439	731	708	1,434	729	706	-0.3	-0.3	-0.3
Serbia	4,486	2,242	2,244	4,444	2,221	2,223	-0.9	-0.9	-0.9
Turkey	56,392	28,524	27,868	54,829	27,527	27,302	-2.8	-3.5	-2.0

Source: Eurostat (online data codes: demo_pjan and lfsa_pganws), extracted in February 2022.

7.3 Coherence with other employment and unemployment estimates

Coherence of employment for EU-LFS and Business Statistics

Business statistics, whether Structural Business Statistics (SBS) or Short-term Business Statistics (STS), focus on production-related variables like output, turnover or added value. Nevertheless, they also produce some estimates of employment. These estimates may be and frequently are different from EU-LFS results. The main reasons for these differences are:

- Different scope: Business surveys gather information on production units operating in the territory whereas EU-LFS gathers information on people living in the country. Consequently, cross-border or seasonal workers are correspondingly registered in different countries depending on the different source.

- Different coverage: The EU-LFS usually does not collect information for people living in collective households, while Business Statistics do not exclude this information. The EU-LFS covers all economic activities and all firm sizes, whereas Business Statistics typically do not gather information on agriculture, government or some service activities. In addition, business registers used to compile Business Statistics may not include small enterprises below a certain threshold or may leave out employment not included in the payroll or in the accounting books (e.g. family workers).

- Different units: Business surveys estimate the number of jobs. In contrast, the EU-LFS counts jobholders. Business surveys rarely have access to jobholders' features, like age, gender, etc., for which the EU-LFS is the only source.

Coherence of employment for the EU-LFS and National Accounts

Key concepts used in National Accounts (NA), such as domestic employment, have no correspondence in the EU-LFS, which uses number of employed persons based on residency within the national border (national employment) instead. There are also differences in coverage: the EU-LFS samples only persons living in private households, while National Accounts cover all persons regardless of their type of residence. In addition, the EU-LFS does not consider conscripts and unpaid trainees as employed whereas these are explicitly or implicitly accounted for in the NA. The reference period for the measurement could also contribute to some differences. The EU-LFS estimates represent the average on all weeks of the year (for annual results) or of the quarter (for quarterly results). National Accounts stock estimates refer to the mid of the year (for annual accounts) or the mid of the quarter (for quarterly accounts).

As expected, the employment estimates based on EU-LFS data usually lie somewhat below the estimates of employment calculated by National Accounts. In table 7.2, the data is divided based on the importance of the EU-LFS in the production of the National Accounts data. National Accounts estimates on employment are in general higher, especially in countries with a considerable percentage of irregular economy.

Table 7.2: Employment (national concept) in levels and growth rates, in two different datasets on the Eurostat website (LFS and NA), 2020

	2020 levels				2019–2020 growth rates		
	Labour Force Survey	National Accounts	LFS-NA	(LFS - NA)/NA	Labour Force Survey	National Accounts	LFS-NA
	(in thousands)			(%)	(%)	(%)	(p.p.)
1) Countries using EU-LFS as their only source for employment in National Accounts. EU-LFS is only adjusted for conceptual alignment to ESA2010							
Czechia	5 235.1	5 288.13	-53.0	-1.0	-1.3	-1.6	0.3
Estonia	646.8	656.8	-10.0	-1.5	-2.3	-2.2	-0.1
Latvia	893.0	899.9	-6.9	-0.8	-1.9	-1.9	0.0
Romania	8 521.1	8 658.2(p)	-137.1	-1.6	-1.8	-1.9	0.1
Sweden	5 064.3	5 064.3	0.0	0.0	-1.3	-1.3	0.0
2) Countries using mainly EU-LFS, but replacing it in a few industries (or labour status), on a case-by-case basis							
Greece	3 875.5	4 598.3(p)	-722.9	-15.7	-0.9	-1.2	0.3
Lithuania	1 358.1	1 360.72	-2.6	-0.2	-1.5	-1.6	0.1
3) Countries not using EU-LFS, or making minimal use of it							
Belgium	4 803	4 977.3(p)	-174.3	-3.5	-0.6	0.0	-0.6
Denmark	2 852.4	2 945	-92.6	-3.1	-0.9	-0.7	-0.2
France	26 995.3	28 713.0(p)	-1,717.7	-6.0	-0.5	-0.9	0.4
Cyprus	417.4	442.6(p)	-25.2	-5.7	0.2	-0.6	0.8
Luxembourg	292.4	275.8	16.7	6.0	1.1	1.5	-0.4
Malta	261.1	259.1	2.0	0.8	2.5	2.7	-0.2
Austria	4 296.8	4 356.12	-59.3	-1.4	-1.3	-1.5	0.2
Slovenia	978.1	1 044.24	-66.1	-6.3	-0.5	-0.9	0.4
Iceland	194.5	192.8(p)	1.7	0.9	-3.2	-4.7	1.5
4) Countries combining sources for labour supply and demand, EU-LFS being one source among others. This group is rather heterogeneous and can be sub-divided as follows:							
4a) Countries giving precedence to labour supply sources (i.e. EU-LFS)							
Spain	19 202.4	19 482.1(p)	-279.7	-1.4	-2.9	-4.1	1.2
Croatia	1 657.4	1 668.59	-11.2	-0.7	-1.3	-1.2	-0.1
Poland	16 441.9	16 442	-0.1	0.0	-0.1	-0.1	0.0
Portugal	4 814.1	4 890.1(p)	-76.0	-1.6	-2.0	-1.8	-0.2
4b) Countries not giving precedence to any labour side							
Bulgaria	3 121.7	3 451.74	-330.0	-9.6	-3.4	-2.3	-1.1
Hungary	4 460.5	4 603.2(p)	-142.7	-3.1	-1.1	-0.9	-0.2
4c) Countries giving precedence to labour demand sources (i.e. employment registers and/or enterprise surveys)							
Germany	41 861.7(p)	44 803.0(p)	-2,941.3	-6.6	-1.3	-0.7	-0.6
Ireland	2 294.3	2 244.98	49.3	2.2	-1.2	-1.5	0.3
Italy	22 903.8	24 408.3	-1,504.5	-6.2	-2.0	-2.0	0.0
Netherlands	8 981.1	9 359.0(p)	-377.9	-4.0	0.0	-0.4	0.4
Slovakia	2 531.3	2 531.27	0.0	0.0	-2.0	-2.0	0.0
Finland	2 528.2	2 616.9	-88.7	-3.4	-1.5	-2.0	0.5
Norway	2 702	2 719	-17.0	-0.6	-0.5	-1.3	0.8
Switzerland	4 696.1	4 696.14	0.0	0.0	-0.2	-0.2	0.0

Note: (p) indicates that information is provisional.

Source: Eurostat Labour Force Survey, Annual averages (online data code: lfsa_egan) and Eurostat National Accounts, national concept (online data code: nama_10_pe), extracted in February 2022.

Apart from the coverage, measurement and conceptual differences mentioned above only account for a relatively small part of the difference between the two estimates. In 2020, a difference higher than 1.5% concerns seventeen participating countries (as shown in table 7.2) where Bulgaria, Germany, Greece, France, Italy, Cyprus, Luxembourg and Slovenia show the highest discrepancies, with a difference of more than 5% [17].

When comparing data from the EU-LFS and National Accounts, users are generally also interested in whether the two sources show the same trend or not. Table 7.2 includes the comparison of data on employment growth in 2020. The results show that both sources are broadly comparable in terms of the direction of the employment growth for the EU. Moreover, it becomes clear that the differences are mostly due to the size of the growth figures.

The reasons for the disparities, either in the levels or in the direction of the employment growth, are not fully known. In general, the actual sources of incoherence are quite diverse across countries. The issue of incoherence between the EU-LFS and National Accounts employment estimates has been addressed by a Eurostat-coordinated Task Force on the Quality of the Labour Force Survey [18]. By the use of reconciliation tables, a range of potential sources of incoherence on the EU-LFS side was identified. They are either related to a biased measurement of specific areas of employment (such as marginal employment, employment in hidden/undeclared labour activities, employment in private households, illegal immigrants) or emerging from data collection, as in the case of non-response and proxy interviews.

National Accounts combine data from all available data sources in the country. This method allows a better coverage of the non-observed economy. For this reason, National Accounts estimates are frequently higher than EU-LFS employment estimates. In addition, it can be pointed out that EU-LFS estimates are subject to sampling errors, both with regard to levels and changes between periods (cf. Tables 4.1a and 4.1b in chapter 4). When changes between periods are small, this may result in diverging trends between National Accounts and EU-LFS figures, just because for the EU-LFS the changes are within the margin of error. Concerning National Accounts, some indicative reasons for incoherence can be mentioned: National Accounts may use sources different from the EU-LFS (or EU-LFS combined with other sources) to estimate employment. National Accounts may introduce adjustments to reach a consistency between the employment reported by its sources and other related variables, like salaries or production. The National Accounts approach, by comparing and combining different sources, is also more prone than EU-LFS to identify and address underreporting or systematic biases. All in all, National Accounts are judged more suitable to measure employment levels, employment growth and industry breakdowns while the EU-LFS is more adequate to measure participation in the labour market (i.e. employment rates, participation rates, etc.) or to analyse the situation of specific socio-economic groups of the population (e.g. by age, gender or educational level).

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[17]   No data is available for Montenegro, North Macedonia, Serbia and Turkey.

[18]   See https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-RA-09-020

Coherence of unemployment for EU-LFS and registers

The main coherence issues between unemployment estimated by the EU-LFS and that derived from registers are the different definitions and the different measurement methods. According to the ILO definition adopted by the EU-LFS, unemployed persons comprise persons aged 15 to 74 years who fulfil the three following conditions:

- Not employed during the reference week;

- Available to start work within the two weeks following the reference week;

- Actively seeking work in the four weeks preceding the reference week or having already found a job to start within the next three months.

The definition of register unemployment varies from country to country. In general, the registration as a job seeker at the public employment office is the common basis for being counted in the unemployment register.

The actual sources of incoherence between the EU-LFS and register unemployment figures are quite diverse across countries. This may be due to several reasons:

- The EU-LFS excludes all individuals who have any kind of job (1-hour criterion) from unemployment, whereas registers can include individuals who have temporary jobs, jobs with less than a certain number of hours or salaries below a given amount;

- The immediate availability for a job required by EU-LFS is based on self-declarations. On the other hand, registers could exclude individuals who miss periodical meetings or refuse a fair job offer;

- In the EU-LFS, registration at the public employment office in order to find a job is only one of the possible active search actions;

- Persons who are looking for a job but who have not paid any contributions and are not eligible for unemployment benefits may not have any interest in registering for work and consequently do not appear in the registered unemployment figures but may be included in the EU-LFS;

- Different reference periods (EU-LFS uses continuous reference weeks and registers often use a specific day of each month as a reference);

- Any delay in updating the registers;

- In some countries, unemployed persons aged 65 years and older, who are looking for a job, cannot be registered;

- The EU-LFS often covers only people residing in private households while registers cover all persons who fulfil legal criteria to be included in the registers, regardless if they live in private or institutional households.

- Persons on lay-off (until three months) are not classified as unemployed in the EU-LFS but as employed persons (temporarily absent from work) while they can be registered at the public employment office as unemployed;

- Figures from registers may not include full-time students looking for employment which could be considered unemployed if they comply with the ILO criteria;

- Moreover, EU-LFS estimates are subject to sampling errors, which do not affect estimates based on registers.

In ten countries (Denmark, Spain, Cyprus, Luxembourg, Malta, Portugal, Romania, Sweden, Switzerland and Turkey) unemployment estimates coming from the LFS exceed figures from registers, while in fifteen countries (Belgium, Bulgaria, Czechia, Germany, Greece, France, Lithuania, Hungary, the Netherlands, Austria, Poland, Slovenia, Slovakia, Finland and Serbia) it is the opposite. Eight countries are not able to provide any assessment about the direction of the differences.

8 Accessibility and clarity

8.1 Definition

Accessibility and clarity refer to the conditions and modalities by which users can access, use and interpret data.

8.2 Available information

Eurostat publishes both quarterly and annual results. Eurostat also publishes an annual compendium describing the main characteristics of the national surveys [19].

Eurostat's public website is free of charge and includes main indicators, and detailed results, constantly updated, derived from the EU-LFS. All data on the website is supplemented by meta-data in Euro SDMX Metadata Structure (ESMS), giving basic information on the background and a summary of the methodology. More detailed information can be found at the dedicated EU-LFS web page [20] and at EU-LFS Statistics Explained [21].

Eurostat also produces tailor-made tables [22] not available online at the request of users. More than 1 300 user requests are processed every year by Eurostat concerning EU-LFS data.

Since 2011, researchers can get anonymised datasets [23] containing microdata free of charge. Data from EU Member States, Iceland, Norway and Switzerland are available in this format. In 2020, around 200 researchers or research groups have worked with EU-LFS microdata (new contracts and amendments).

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[19]   Available at: https://ec.europa.eu/eurostat/en/web/products-statistical-reports/-/KS-FT-22-001

[20]   See https://ec.europa.eu/eurostat/web/lfs/overview

[21]   See https://ec.europa.eu/eurostat/statistics-explained/index.php/EU_labour_force_survey

[22]   For more information, please consult https://ec.europa.eu/eurostat/help/support

[23]   For more information, please consult https://ec.europa.eu/eurostat/web/microdata/overview

9 Regional labour market statistics [24]

9.1 Introduction

The EU-LFS is designed to give accurate quarterly information at national level and precise annual information at NUTS2 regional level. All participating countries provide microdata that includes NUTS2 level codes with a decent degree of geographical comparability. This allows the calculation and dissemination of a wide set of comparable indicators. Eight countries, namely Estonia, Cyprus, Latvia, Luxembourg, Malta, Iceland, Montenegro and North Macedonia comprise a single NUTS2 region, i.e. the national result is also the NUTS2 result (resp., NUTS1 result).

Furthermore, users often request data at NUTS3 level for the purposes of regional analyses as well as for monitoring the progress of regional cohesion. However, as the transmission of data at NUTS3 level has no legal basis, the participating countries provide figures on a voluntary basis with the purpose of deriving other regional aggregations. Therefore, available NUTS3 data is currently only used for publications at a more aggregated level. For example, unemployment and employment figures are disseminated by urban-rural typology, coastal regions, mountain regions, island regions, border regions as well as metropolitan regions, which are based on data of groups of NUTS3 regions [25].

The EU-LFS specifies the compilation of figures at NUTS2 level in detail. Since this is not the case for figures at NUTS3 level, the sources and methods are described as follows.

9.2 Sources for NUTS3 level labour market statistics

A majority of EU Member States provides the NUTS3 code in the EU-LFS microdata. For 2020, 19 EU Member States (Austria, Belgium, Bulgaria, Czechia, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, the Netherlands, Slovakia, Spain, Sweden) as well as Iceland, Norway and North Macedonia sent the NUTS3 codes with the EU-LFS microdata. All but two of these countries (France and Spain) gave their consent to Eurostat to use this data to produce aggregations by regional typologies. Moreover, four of the 23 countries (Austria, Ireland, France and Spain) providing NUTS3 level microdata transmit tabulated results in addition.

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[24] Chapter 9 was jointly written by Eurostat Units F3 – Labour market and lifelong learning and E4 – Regional statistics and geographical information.

[25] For a detailed description of these regional typologies, see:
https://ec.europa.eu/eurostat/web/rural-development/methodology
https://ec.europa.eu/eurostat/web/metropolitan-regions/background
https://ec.europa.eu/eurostat/web/coastal-island-outermost-regions/methodology

Six countries (Germany, Croatia, Poland, Portugal, Romania and Slovenia) only deliver tabulated results, partly because their data is not always based on annual EU-LFS results. However, due to non-sampling errors and the combined use of EU-LFS data with the information from other sources (e.g. registers, small area estimates), it is difficult to assess the quality of the NUTS3 level labour market data according to scientific standards. Portugal and Germany transmitted employment and unemployment data already aggregated by regional typologies. Germany did not transmit the aggregated 2020 data due to the insufficient quality of the regional data at NUTS3 level. In 2020. No NUTS3 data is available for Switzerland and Turkey. In the cases of Cyprus, Luxembourg and Montenegro, the NUTS3 level does not differ from the NUTS1 and NUTS2 level.

From 2014 onwards, the EU-LFS reliability limits used for the annual averages of the quarterly data [26] are applied directly on the aggregated labour market data by regional typologies. In the past years, the EU-LFS reliability limits used for NUTS2 level data were also applied for the individual NUTS3 level data, which resulted in a high number of missing aggregate values.

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[26] For more information, see:
https://ec.europa.eu/eurostat/statistics-explained/index.php/EU_labour_force_survey

10 Annex

10.1 Tables

Table 10.1: Comments and methodological notes about coverage errors provided by the countries, 2020

	Comments
Belgium	*Under-coverage:* Households, all members of which are 77 years or older and collective households (about 0.15% of all households) are excluded before draw. Delay between draw of household (from National Population Register, kept up to date "permanently") and fieldwork: between 2 and 6 months.
Czechia	*Under-coverage:* Households are selected once a year from the Register of Census Areas. Due to differences in time span there is not the actual information about addresses or flats. The sampling frame contains only private households. Persons living in institutional households are not covered. *Over-coverage:* Not existing or not inhabited flats remain in the Register of Census Areas.
Estonia	*Under-coverage:* In 2020, 13 284 households of 18 688 households sampled for the survey, were interviewed. Among the households not interviewed, in 197 cases (1.1% of total number of sampled households) the reason was an error or inaccuracy of the frame (person emigrated or left the county, person deceased, wrong address, etc.). By counties the share of frame errors varied from 0.2% to 2.4%.
Greece	*Under-coverage:* Population living in collective households or in dwellings outside the borders of built areas is not covered. Frames are compiled at census, and sampling rates are based at census population. Frames are updated at the first time when the primary sampling units are selected but not at subsequent waves. *Over-coverage:* The sample in Greek LFS is a sample of dwellings. The percentage of over-coverage is computed as the percentage of dwellings that are either used as "secondary residence" of the household or they are used solely for business purposes (e.g., a doctor's office).
Spain	*Under-coverage:* Percentage calculated as 'omitted' dwellings detected in the 'quality control survey'; measures of impact are not available. *Over-coverage:* Average of the four quarter percentages of dwellings out of frame ('no encuestables') The touristic areas are more prone to higher rates.
Croatia	*Under-coverage:* Since the beginning of 2014, the new sample frame based on the data from the Census of Population, Households and Dwellings in 2011 has been in use. This sample frame includes addresses of private households on the whole territory of Croatia; hence the LFS results relate to the whole country. As the Census database was not updated since 2011, it is becoming obsolete, and some problems regarding migration and/or newly built dwellings will be present in a larger extent. *Over-coverage:* Over-coverage rates are actually non-eligibility rates of addresses selected in sample.
Italy	*Under-coverage:* Households are selected once a year from the municipalities' registry; they cover the whole reference population. The data might contain errors as for information such as addresses (due for instance to recent change of the address), wrong inclusions (recent emigration) and missed inclusions (recent immigration). As for the survey's management strategies, ISTAT requires that each non-responding household has to be replaced with a household having similar characteristics, in order to maintain as much as possible the sample representativeness and to minimize the impact of unit non-response. No more than 3 replacements are admitted.

Cyprus	***Under-coverage:*** The sample was drawn from the Census of Population household frame of 2011. In a post enumeration survey conducted after the census, under-coverage of 1.97% was estimated.
Lithuania	***Over-coverage:*** Among not interviewed households, in 371 cases (1% of total number of sampled households) the reason was an error or inaccuracy of the frame (imprecise address, the premises at the indicated address are non-residential, etc.).
Luxembourg	***Under-coverage:*** The LFS sample is drawn from the register around six times a year and the sampled persons are interviewed five times during a two-year period. No additional sample selection is made in order to update the sample with immigrants during this two-year period. This under-coverage is judged to have marginal effects on the LFS-estimates. ***Over-coverage:*** The over-coverage consists of people born abroad who left Luxembourg without reporting to the authorities. When these persons are included in the sample there are no information that they have moved out of the country. They cannot be reached for interviews and will be classified as non-response. For the moment we do not possess any data about this over-coverage and its magnitude but we estimate it as a marginal impact.
Hungary	***Over-coverage:*** It mainly consists of unoccupied dwelling, not a dwelling unit, not existing address.
Malta	***Under-coverage:*** Under-coverage may be observed in the foreign component and in households which we are not aware about. This is due to the fact that there is a time-lag in updates to the frame. Hence, the rate of under coverage for private households cannot be worked out.
Austria	***Under-coverage:*** From 2004 onwards, the sample for the Austrian LFS is drawn from the Austrian Register of Residents. This register was set up in 2002. The sample is drawn three months before the start of the quarter. This results in a time lag of three to six months. Therefore, dwellings where persons moved in after the due date for the survey are not covered. Furthermore, under-coverage of migrants can be observed, although the questionnaires are translated into several languages.
Poland	***Under-coverage:*** New dwellings underrepresented in the sample - dwellings are selected once a year from the register of housing units and due to differences in time span, there is no current information about addresses or flats. ***Over-coverage:*** Over-coverage consists of dwellings in which inhabitants are not present for a long time, the dwelling is non-residential (shop) or not found (incorrect address).
Portugal	***Under-coverage:*** With regard to the under-cover rate, people living in collective households or institutions are excluded from the sampling frame. According to the last Census (2011), this population represents less than 1% of the total population. Nevertheless, calibration ensures that LFS weighted sample sums the estimates of resident population in Portugal. In addition, the new or renewed buildings and dwellings constructed after the last Census are also excluded, but the occupation status is not known, that is if they are being used as usual residence or if they are vacant, and the percentage of the population they represent.
Romania	***Under-coverage:*** Due to the lack of appropriate information, the new dwellings, built after 2011 Census of the Population and Dwellings, that could possibly constitute a sampling frame of the new dwellings, have not been taken into account. ***Over-coverage:*** Over-coverage rates were estimated on the basis of the survey samples, as ratio between number of not-eligible dwellings and number of sampled dwellings.
Slovakia	***Under-coverage:*** The LFS sample is based on a Population Census conducted once every ten years (last time in 2011). There is the lack of information on new statistical units during a rather long period. Errors as for information on addresses of dwellings; missing coverage of collective households, persons living in convents, members of the Slovak embassies and institutions abroad. Under-coverage comprises people born abroad and living in collective houses. ***Over-coverage:*** Mainly young residents working temporarily abroad can stay to live there.
Finland	***Under-coverage:*** The sampling frame used is the total population database maintained by Statistics Finland. It is based on the Population Information System of The Population Register Centre and updated regularly. Under-coverage fairly small (no large-scale immigration). ***Over-coverage:*** Mostly emigration in wave 1, deaths and emigration for later waves.
Norway	***Under-coverage***: Do not include those 75 years and older. We impute them as outside the labour force. Number of persons employed about 0.25 per cent too low. The sampling frame consists of registered family units where the main person in the family is aged 15-74 years. Women married to men 75 years or older are underrepresented. ***Misclassification:*** Using family as a proxy for household at the moment.
Switzerland	***Misclassification:*** Differing household composition. Unit non-response if the selected person is not living in the selected household (anymore), else no impact on estimates.

Table 10.2: Procedure used by countries to reduce measurement errors, 2020

	Respondent		Interviewer		Fieldwork			Questionnaire	
	Letter introducing survey	Phone call	Periodical training	Feedbacks	Monitoring directly by contacting respondents	Monitoring directly by listening	Monitoring remotely by indicators	Questionnaire in different languages	Online check
Belgium	Y	Y (not always)	Y	Y	Y	N	N	Y	Y
Bulgaria	Y	N	Y	N	Y (occasionally)	N	N	Y	NA
Czechia	N	Y	Y	N	N	N	Y	Y	Y
Denmark	Y	N	Y	Y	N	N	N	Y	Y
Germany	Y	Y (few)	Y	Y	N	N	UNA	Y	Y
Estonia	Y	Y	Y	Y	Y	Y	N	Y	Y
Ireland	Y	N	Y	Y	Y	Y (CATI only)	Y	N	Y
Greece	Y	Y (not in 1st wave)	Y	N	N	N	Y	N	Y
Spain	Y	N	N	Y	Y	Y	Y	Y	Y
France	Y	Y	Y	Y	N	Y	Y	N	Y
Croatia	Y	Y	N	Y	Y	Y	N	Y	Y
Italy	Y	N	Y	Y	Y	Y	Y	Y	Y
Cyprus	Y	N	Y	Y	Y	N	Y	Y	Y
Latvia	Y	N	Y	Y	Y	Y	Y	Y	Y
Lithuania	Y	Y	Y	Y	Y	N	Y	Y	Y
Luxembourg	Y	N	Y	Y	N	Y	Y	Y	Y
Hungary	Y	N	Y	Y	Y	Y	Y	Y	N
Malta	Y	Y	Y	Y	Y	Y	N	Y	Y
Netherlands	Y	N	Y	Y	Y	Y	Y	N	Y
Austria	Y	Y	Y	Y	N	Y (CATI only)	Y	Y	Y
Poland	Y	N	Y	Y	Y	N	Y	N	Y
Portugal	Y	Y	Y	Y	Y	Y	Y	N	Y
Romania	Y	N	Y	Y (CAPI only)	Y	N	Y	N	Y
Slovenia	Y	N	Y	Y	Y	Y	Y	N	Y
Slovakia	Y	Y	Y	Y	Y	N	N	N	Y
Finland	Y	Y	Y	Y	Y	N	Y	Y	Y
Sweden	Y	Y	Y	Y	N	Y	Y	Y	Y
Iceland	-	-	-	-	-	-	-	-	-
Norway	Y	N	Y	Y	N	N	N	Y	Y
Switzerland	Y	Y	Y	Y	N	Y	Y	Y	Y
Montenegro	Y	N	Y	Y	Y	N	N	N	NA
North Macedonia	Y	N	Y	Y	Y	Y	N	N	Y
Serbia	Y	N	Y	Y	Y	Y	Y	N	Y
Turkey	Y	N	Y	Y	Y	Y	Y	Y	Y

Notes: (Y) Indicates yes; (N) Indicates no; (-) Indicates that the country has not been able to provide the information or does not know; NA indicates Not Applicable (for example online checks with computerised questionnaire when only PAPI technique is used for interviews); UNA indicates information unavailable in the country.

Table 10.3: Item non-response (%) for the variables defined by Commission Regulation (EC) No 377/2008 and clarifications provided by Member States

Quarterly data 2020

Variable status	Identifier	Q1	Q2	Q3	Q4	Short comments on reasons for non-available statistics and prospects for future solutions
Belgium						
compulsory	HWOVERPU	15.6	21.6	21.8	18.3	Technical issues. The variable will be adjusted from Q1 2020 on.
compulsory	NACE2J2D	15.8	15.4	21.1	18.9	We have no item non-response in wave 1 (CAPI) but a high percentage of item non-response in the waves 2-4 (CAWI/CATI). We are investigating if a change in our CAWI/CATI questionnaire could reduce item non-response for NACE2J2D.
compulsory	HWACTUA2	26.7	36.0	27.6	30.1	We have little item non-response in wave 1 (CAPI) but a higher percentage of item non-response in the waves 2-4.
compulsory	WANTWORK	47.6	47.0	50.5	49.0	We do not ask WANTWORK to all persons with SEEKWORK = 3. We have no information about WANTWORK for persons with ILOSTAT = 1 & SEEKWORK = 3 neither for persons with SEEKWORK = 3 but who are (early) retired. 99% or more of the item non-response concerns (early) retired persons. We can consider them as not willing to work anymore since they do not seek work. This variable will be adjusted from Q1 2021 on.
Bulgaria						
compulsory	TEMPDUR			12.1	13.0	For persons without employment contract (main part of the variable non-response) the duration of job is often unclear.
compulsory	HWACTUA2	23.1	14.9	21.4	21.3	Respondents meet difficulties to answer the question, especially self-employed. More than half of the non-respondents were self-employed in the second job.
compulsory	METHODH - employed	C	C		C	This method is rarely used by employed persons to find another job.
compulsory	METHODI - employed	C	C	C	C	This method is rarely used by employed persons to find another job.
compulsory	METHODI - not employed	C	C			This method is rarely used by employed persons to find another job.
compulsory	METHODJ - employed		C			This method is rarely used by employed persons to find another job.
compulsory	METHODK - employed	C	C			Only methods corresponding to variables from METHODA (col_103) to METHODI (col_111) are considered as active methods.
compulsory	METHODL - employed	C	C			Only methods corresponding to variables from METHODA (col_103) to METHODI (col_111) are considered as active methods.
compulsory	METHODM - employed	C	C	C	C	Only methods corresponding to variables from METHODA (col_103) to METHODI (col_111) are considered as active methods.
compulsory	METHODM - not employed	C	C		C	Only methods corresponding to variables from METHODA (col_103) to METHODI (col_111) are considered as active

Variable status	Identifier	Q1	Q2	Q3	Q4	Short comments on reasons for non-available statistics and prospects for future solutions
						methods.
Czechia						
compulsory	METHODH - not employed		C			
compulsory	EDUCSTAT	10.9	9.3	3.4	5.5	Only persons aged 15-69
Denmark						
compulsory	SIGNISAL	C	C	C	C	Respondents included in the filter are coded with 'don't know'.
compulsory	MSTARTWK	17.0	15.0	15.0	16.0	
Germany						
compulsory	SEEKTYPE - employed	99.9	100.0	99.9	99.9	
compulsory	SEEKTYPE – not employed	11.0	.	.	.	
compulsory	SEEKDUR - employed	19.2	19.4	25.6	25.3	
compulsory	METHODJ - employed	.	.	C	C	
compulsory	METHODJ - not employed	C	C	.	.	
compulsory	METHODK - employed	.	.	C	C	
compulsory	METHODK - not employed	.	.	C	C	
compulsory	METHODL - employed	.	.	C	.	
compulsory	METHODL – not employed	.	.	.	C	
compulsory	INTWEEK	58.1	10.5	.	.	
Estonia						
compulsory	METHODH - employed	.	.	C	.	Small figures due to very few cases, if any.
compulsory	METHODH - not employed	.	.	C	.	Small figures due to very few cases, if any.
compulsory	METHODI - employed	C	C	C	.	Small figures due to very few cases, if any.
compulsory	METHODI - not employed	.	C	.	.	Small figures due to very few cases, if any.
compulsory	METHODK - employed	C	.	.	.	Small figures due to very few cases, if any.
compulsory	METHODL - employed	C	C	.	.	Small figures due to very few cases, if any.
Ireland						
compulsory	TEMPDUR	21.0	20.2	25.7	26.6	
compulsory	HWOVERP	11.4	24.6	15.8	15.2	
compulsory	HWOVERPU	11.6	24.6	16.3	15.5	
compulsory	HWWISH	80.5	80.2	80.6	82.5	
Spain						
compulsory	TEMPDUR	52.6	53.6	50.6	53.7	All the item non-response is due to 'do not know' answers: 89.2% said that they do not know the total duration but they worked "at least one month'; 10.8% said that they do not know anything about the total duration (not even if they worked more or less than a month).
compulsory	METHODM - employed	.	C	C	.	No 'other' active method in the survey.
compulsory	METHODM - not employed	C	C	C	C	No 'other' active method in the survey.

compulsory	COURLEN	41.0	43.4	46.4	41.1	People aged 15 plus 'don't know' number of hours
compulsory	EDUCLEVL	11.4	11.8	12.4	11.3	People aged 15.
France						
compulsory	TEMPDUR	12.0	12.2	11.8	11.9	A part of the non response comes from the people that declare to be in internship. We do not ask or use the duration of the internship. Other part of the non response comes from diverse non response or from the fact that some people say they do not have any work contract and thus cannot be asked about its duration
compulsory	HWOVERP	.	19.9	.	.	In the Q2 2020, a very high proportion of employed persons did not work any hours, due to the health crisis. This question is not asked for people who have not worked.
compulsory	HWOVERPU	.	19.9	.	.	Same reason as for HWOVERP.
compulsory	NACE2J2D	24.3	24.9	23.8	24.6	The code for EXIST2J has recently changed to correct some errors. The code of NACE2J2D was not changed to take this into account.
compulsory	SEEKTYPE - not employed	.	12.5	10.4	.	For this variable, we have approx. 5% of missing values (with filter from explanatory notes). These are unemployed or inactive people who are not looking for a job. Most of them have already found a job that starts later, so they are not asked what kind of job they have found.
compulsory	SEEKDUR - not employed	.	10.8	.	.	Same reason as SEEKTYPE.
compulsory	METHODK - employed	C	C	C	.	
compulsory	METHODL - employed	.	C	.	.	
compulsory	METHODL - employed	C	C	.	C	
compulsory	INTWEEK	11.9	12.6	11.7	13.2	For households where all persons are aged 65 or more and are inactive, the variables are imputed for waves 2 to 5; thus there is no interview week for them.
Croatia						
compulsory	HWOVERP	98.6	98.2	98.0	97.4	Variable is adjusted from Q3 2019 on.
compulsory	METHODH - employed	C	.	.	.	This method is rarely or never used in the job search.
compulsory	METHODH - not employed	.	C	.	.	This method is rarely or never used in the job search.
compulsory	METHODI - employed	.	.	.	C	This method is rarely or never used in the job search.
compulsory	METHODK - employed	C	.	.	.	This method is rarely or never used in the job search.
compulsory	COURLEN	13.6	18.4	.	.	Most of this non-response is related to a proxy interview. Proxy respondents do not usually know the number of hours spent on all taught learning activities.
Italy						
compulsory	HWWISH	.	.	14.1	.	The questions on WISHMORE-HWWISH in the programmed questionnaire are referring to the wish of working more than the actual number of hours. Most of the item non-responses are due to persons that did not want to work at all in the reference week (code '0' is not available); they are mainly concentrated in the 3rd quarter in which there are summer holidays.
compulsory	SEEKTYPE - employed	14.1	17.9	14.6	15.1	Item non-responses are due to persons that do not have preferences about an employment as self-employed or employee.

compulsory	SEEKTYPE - not employed	22.0	20.9	20.3	20.3	Item non-responses are due to persons that do not have preferences about an employment as self-employed or employee.
Cyprus						
compulsory	SIGNISAL	.	.	.	C	
compulsory	COUNTRYW	C	C	C	C	Country is always CY.
compulsory	METHODB - employed	.	.	.	C	This method is rarely or never used in the job search.
compulsory	METHODH - employed	.	C	C	C	This method is rarely or never used in the job search.
compulsory	METHODH - not employed	.	.	.	C	This method is rarely or never used in the job search.
compulsory	METHODI - employed	C	C	C	C	This method is rarely or never used in the job search.
compulsory	METHODI - not employed	.	.	.	C	This method is rarely or never used in the job search.
compulsory	METHODL - employed	.	.	C	C	This method is rarely or never used in the job search.
Latvia						
compulsory	EXISTPR	31.1	24.9	24.5	25.2	Persons aged 75+ were not interviewed
compulsory	METHODH - employed	C	C	.	.	Method was not frequently used
compulsory	METHODK - employed	C	.	.	.	Method was not frequently used
compulsory	METHODL - employed	.	C	.	C	Method was not frequently used
compulsory	METHODM - not employed	.	.	.	C	Method was not frequently used
compulsory	EDUCSTAT	15.0	11.4	10.8	11.3	Method was not frequently used
compulsory	COURATT	15.2	11.4	10.9	11.4	Method was not frequently used
compulsory	HAT11LEV	15.0	11.3	10.8	11.3	Persons aged 75+ were not interviewed
Lithuania						
compulsory	METHODL - employed	.	.	.	C	This method used to find work is not very popular among employed respondents.
Luxembourg						
compulsory	MSTARTWK	13.0	13.6	16.1	14.4	Due to proxy
compulsory	HWUSUAL	10.7	.	.	.	Due to proxy
compulsory	NACE2J2D	20.3	15.8	13.7	16.7	Due to proxy
compulsory	MONTHPR	19.9	18.1	22.0	19.9	Due to proxy
Hungary						
compulsory	MSTARTWK	.	12.6	18.8	26.3	EU-Filter: REFYEAR – YSTARTWK<=2 HU-Filter: SUM (REFYEAR – YSTARTWK < 2) or (SUM(REFYEAR – YSTARTWK = 2) and (REFMONTH <= MSTARTWK)) + There is an upper-age limit (74 years) in HU-LFS for this variable.
compulsory	EXISTPR	24.0	22.8	23.8	23.7	There is an upper-age limit (74 years) in HU-LFS for this variable.
compulsory	MONTHPR	.	.	18.3	21.7	EU-Filter: REFYEAR – YEARPR<=2 HU-Questionnaire: The HU-LFS (in accordance with the EU-LFS) gives in some cases more detailed information than used in the Eurostat filter. This information is used by trans-codification program of HU-LFS dataset.
compulsory	METHODH - employed	C	.	C	.	
compulsory	EDUCSTAT	12.6	12.1	12.4	12.4	There is an upper-age limit (74 years) in HU-LFS for this variable.
compulsory	COURATT	12.6	12.1	12.4	12.4	There is an upper-age limit (74 years) in HU-LFS for this variable.
Malta						
compulsory	MONTHPR	.	.	14.9	13.5	
compulsory	METHODH - employed	.	.	C	.	Method used rarely
compulsory	METHODH - not employed	C	C	.	C	Method used rarely

compulsory	METHODI - employed	.	C	C	C	Method used rarely
compulsory	METHODJ - employed	C	C	C	C	Information on this variable is not collected.
compulsory	METHODJ - not employed	C	C	C	C	Information on this variable is not collected.
compulsory	METHODK - employed	C	C	C	C	Information on this variable is not collected.
compulsory	METHODK - not employed	C	C	C	C	Information on this variable is not collected.
compulsory	METHODL - employed	C	C	C	C	Information on this variable is not collected.
compulsory	METHODL - not employed	C	C	C	C	Information on this variable is not collected.
Netherlands						
compulsory	NACE3D	.	.	10.1	.	This sector of industry information is retrieved from administrative data. For the majority of the cases, this works properly, yet for the remaining part we were unable to match the sector successfully.
compulsory	TEMPDUR	64.7	62.6	61.7	63.5	Three main reasons for missing. First, this is due to respondents who have a '0' on the variable for the year in which they started searching for a job, and who subsequently did not fill in the number of months they have been searching. The second reason is related to a change in 2010. Since then respondents who do not want to work are asked if they are looking for work, but unfortunately, these respondents do not get the questions regarding the year and month they started searching. The third reason is related to respondents who state that they have recently searched for a job, but also indicate that they have already found a new job that they will start working in within three months. They do not get the questions regarding the year and month they have started searching for a job.
compulsory	NACE2J2D	27.2	26.3	26.3	26.1	Variable collected by registers. Some difficulties in finding NACE code for second activity.
compulsory	SEEKTYPE - not employed	11.2	.	.	.	Partly related to a change in 2010. Since then respondents who do not want to work are asked if they are looking for work, but unfortunately, these respondents do not get the questions regarding the year and month they started searching. Also related to respondents who state that they have recently searched for a job, but indicate that they have already found a new job, which they will start working in within 3 months. They do not get the questions regarding the year and month they have started searching for a job.
compulsory	SEEKDUR - not employed	19.2	16.7	17.3	14.5	More reasons due to issues with questions about year and month when the search for job has started
compulsory	METHODH - employed	C	C	C	C	
compulsory	METHODI - employed	C	C	C	C	
compulsory	METHODJ - employed	C	C	C	C	
compulsory	METHODJ - not employed	C	C	C	.	
compulsory	METHODL - employed	C	C	C	C	
compulsory	METHODL - not employed	C	C	C	.	
optional	COUNTRYB	13.2	14.3	14.1	13.8	
Poland						

compulsory	METHODL - employed	.	C	.	.	In the second quarter of 2020 the 'Awaiting the results of a competition for recruitment to the public sector' as one of the methods of seeking a job didn't occur for the employed looking for another job, that's why the variable METHODL=0 for WSTATOR=1, 2 and LOOKOJ=1 (there is no METHODL=1 for this group).
Portugal						
compulsory	TEMPDUR	20.1	19.5	20.8	23.0	Corresponds to non-response of the employees who did not give an answer to this variable.
compulsory	HWACTUA2	.	10.9	.	.	Corresponds to non-response of the employed persons with second activity who did not give an answer to this variable.
compulsory	METHODM - employed	C	C	C	C	This variable does not exist in PT national questionnaire
compulsory	METHODM - not employed	C	C	C	C	This variable does not exist in PT national questionnaire
Romania						
compulsory	METHODH - employed	C	C	C	C	This search method is rarely used by employed people.
compulsory	METHODI - employed	C	C	C	C	This search method is rarely used by employed people.
compulsory	METHODM - employed	.	C	.	.	This search method is rarely used by employed people.
Slovenia						
compulsory	HWOVERP	89.3	93.4	90.5	89.2	
compulsory	HWOVERPU	94.1	96.4	95.1	94.2	
compulsory	MONTHPR	13.2	13.2	14.8	11.1	
compulsory	METHODI - employed	.	.	.	C	Almost not available in Slovenia
compulsory	METHODL - employed	C	.	C	C	Almost not available in Slovenia
compulsory	METHODL - not employed	C	.	.	C	
compulsory	METHODM - employed	.	.	C	.	Not available in Slovenia
Slovakia						
compulsory	SIGNISAL	C	.	.	.	Each quarter includes different values of the code 1.
compulsory	SEEKTYPE - employed	15.0	18.9	17.2	18.0	Missing of appropriate code for those who are looking for any job (no preference between self-employed and employee) causes higher value of the non-response rate.
compulsory	SEEKTYPE - not employed	11.2	10.9	11.8	13.7	Missing of appropriate code for those who are looking for any job (no preference between self-employed and employee) causes higher value of the non-response rate.
compulsory	METHODH - employed	C	C	C	C	Methods used in job seeking have the same question 'State all methods you used during the last 4 weeks to find work'
compulsory	METHODI - employed	C	C	C	C	Methods used in job seeking have the same question 'State all methods you used during the last 4 weeks to find work'
compulsory	METHODL - employed	C	C	C	.	Methods used in job seeking have the same question 'State all methods you used during the last 4 weeks to find work'
compulsory	METHODM - employed	C	.	C	C	Methods used in job seeking have the same question 'State all methods you used during the last 4 weeks to find work'
compulsory	METHODM - not employed	C	.	.	C	Methods used in job seeking have the same question 'State all methods you used during the last 4 weeks to find work'
Finland						
compulsory	METHODJ - employed	C	C	.	C	Passive job search methods are asked only if none of the active methods have been used.
compulsory	METHODJ - not employed	.	.	C	.	Passive job search methods are asked only if none of the active methods have been used.

compulsory	METHODK - employed	.	C	.	.	Passive job search methods are asked only if none of the active methods have been used.
compulsory	METHODK - not employed	C	.	.	.	Passive job search methods are asked only if none of the active methods have been used.
compulsory	METHODL - employed	.	C	C	C	Passive job search methods are asked only if none of the active methods have been used.
compulsory	METHODL - not employed	C	C	.	C	Passive job search methods are asked only if none of the active methods have been used.
compulsory	METHODM - not employed	.	.	C	.	
Sweden						
compulsory	TEMPDUR	18.3	16.1	15.4	18.2	Respondents do not always remember start and end of work
compulsory	SEEKDUR - not employed	26.0	28.3	17.9	19.0	People tend to forget how long they have been looking for work.
compulsory	METHODH - employed	.	C	.	.	Very infrequent that this variable has the value 1. Checked against micro-data.
compulsory	METHODI - employed	.	C	.	.	Very infrequent that this variable has the value 1. Checked against micro-data.
compulsory	METHODK - employed	.	C	.	C	Very infrequent that this variable has the value 1. Checked against micro-data.
compulsory	METHODL - employed	.	.	.	C	Very infrequent that this variable has the value 1. Checked against micro-data.
Iceland						
compulsory	PROXY	.	.	.	100.0	
compulsory	COUNTRYW	C	C	C	.	
compulsory	TEMPDUR	12.6	.	.	12.3	
compulsory	HWOVERP	78.1	80.4	81.5	77.1	
compulsory	HWOVERPU	78.1	80.4	81.5	77.1	
compulsory	HOURREAS	10.4	19.7	10.4	10.9	
compulsory	HWWISH	35.0	30.4	30.9	30.9	
compulsory	HWACTUA2	17.0	19.6	13.5	16.7	
compulsory	EXISTPR	.	11.0	.	.	
compulsory	SEEKTYPE - not employed	11.0	.	.	.	
compulsory	SEEKDUR - not employed	10.1	.	10.6	.	
compulsory	METHODA - employed	C	C	C	C	
compulsory	METHODG - employed	C	C	C	C	
compulsory	METHODG - not employed	C	.	C	C	
compulsory	METHODH - not employed	.	.	.	C	
compulsory	METHODK - employed	C	C	C	C	
compulsory	METHODK - not employed	C	.	C	C	
compulsory	METHODL - employed	C	C	C	C	
compulsory	METHODL - not employed	C	.	C	C	
compulsory	WANTWORK	33.7	39.9	33.0	28.2	
compulsory	COURLEN	17.6	17.5	20.8	12.7	
compulsory	HATVOC	30.3	35.6	29.8	100.0	
compulsory	EDUCLEVL	100.0	100.0	100.0	100.0	Not collected.
Norway						
compulsory	MSTARTWK	26.9	32.0	35.2	38.4	
compulsory	TEMPDUR	37.0	38.0	37.0	43.4	Many employed persons do not have any date for the end of their temporary work.
compulsory	SEEKTYPE - not employed	.	.	13.1	11.5	Due to proxy.
compulsory	SEEKDUR - employed	10.2	.	.	.	Due to proxy.
compulsory	SEEKDUR - not employed	.	14.0	14.4	11.1	Due to proxy.

compulsory	METHODH - not employed	.	C	C	.	Search method rarely used.
compulsory	METHODI - not employed	.	C	C	C	Search method rarely used.
compulsory	METHODL - employed	.	C	.	C	Search method rarely used.
compulsory	METHODL - not employed	C	C	C	C	Search method rarely used.
compulsory	HATVOC	100.0	100.0	100.0	100.0	
Switzerland						
compulsory	METHODH - not employed	C	C	C	.	This method is rarely used.
compulsory	METHODI - employed	.	C	.	.	This method is rarely used.
compulsory	METHODI - not employed	.	.	C	.	This method is rarely used.
compulsory	METHODL - employed	C	C	C	C	METHODL is not relevant for Switzerland.
compulsory	METHODL - not employed	C	C	C	C	METHODL is not relevant for Switzerland.
Montenegro						
compulsory	SIGNISAL	C	.	.	.	
compulsory	HWOVERP	C	.	.	.	
compulsory	HWOVERPU	C	C	C	.	
compulsory	METHODE - employed	.	.	C	.	
compulsory	METHODG - employed	.	.	C	.	
compulsory	METHODH - employed	C	.	C	.	
compulsory	METHODI - employed	C	.	C	.	
compulsory	METHODJ - employed	.	.	C	.	
compulsory	METHODL - employed	C	.	.	.	
compulsory	COURLEN	.	.	C	.	
compulsory	DEGURBA	100.0	100.0	100.0	.	
North Macedonia						
compulsory	HWOVERPU	.	.	.	C	
compulsory	METHODE - employed	.	C	.	.	
compulsory	METHODL - employed	C	C	C	C	
compulsory	METHODL - not employed	C	C	C	C	
Turkey						
compulsory	NATIONAL	100.0	100.0	100.0	100.0	According to the 2010 Address Based Population Registration System; 99.7 % of population has Turkish Nationality. So, it is not easy to cover non-nationals with a sample survey.
compulsory	COUNTRYW	C	C	C	C	There are very few people who are working abroad and at the same time considered as household member since Turkey is a very broad country. This may only occur in border cities, but not common. So, this variable is not asked.
compulsory	HWOVERPU	100.0	100.0	100.0	100.0	Only total overtime is asked in the questionnaire (paid & unpaid). Since it is not possible to distinguish paid and unpaid overtime. Total overtime is given in HWOVERP and this variable is coded as blank.
compulsory	HWWISH	100.0	100.0	100.0	100.0	This variable was dropped out from the questionnaire in 2009 since it was observed that, results were not reliable.
compulsory	METHODB - employed	.	C	C	C	For employed people all the methods are not asked in same detail, some of them are grouped looking at the frequency.
compulsory	METHODF - employed	.	C	C	C	For employed people all the methods are not asked in same detail, some of them are grouped looking at the frequency.
compulsory	METHODI -	.	C	C	C	For employed people all the methods are

compulsory	employed					not asked in same detail, some of them are grouped looking at the frequency.
compulsory	METHODK - employed	.	C	C	C	For employed people all the methods are not asked in same detail, some of them are grouped looking at the frequency.
compulsory	METHODL - employed	.	C	C	C	For employed people not all the methods are asked in same detail, some of them are grouped looking at the frequency.
compulsory	METHODM - not employed	C	.	.	.	
compulsory	DEGURBA	100.0	100.0	100.0	100.0	

Note: 'C' All records have the same value.

Annual data 2020

Variable status	Identifier	2020	Short comments on reasons for non-available statistics and prospects for future solutions
Belgium			
compulsory	AVAIREAS - not employed	91.6	Early retired persons are asked if they are searching a job. If not. they are not asked if they want a job. So we do not know for these persons if they are available.
Bulgaria			
compulsory	AVAIREAS - employed	44.4	Persons who are employed but temporary absent from work (e.g. on parental leave) - cases with SIGNISAL=3. were not asked this question due to the limitations of paper questionnaire. The future decision will depend on the existence of variable SIGNISAL.
optional	COURWORH	100.0	The variable is not available in the national LFS.
Denmark			
optional	COURPURP	100.0	Not collected as optional variable.
optional	COURFILD	100.0	Not collected as optional variable.
optional	COURWORH	100.0	Not collected as optional variable.
Germany			
compulsory	WAYJFOUN	17.5	
compulsory	TEMPREAS	45.9	
compulsory	SEEKREAS	100	
compulsory	AVAIREAS - employed	100	
compulsory	AVAIREAS - not employed	100	
compulsory	NEEDCARE	22.7	
compulsory	REGISTER	100	
compulsory	COURWORH	100.0	Not collected as optional variable.
Estonia			
compulsory	TEMPREAS	18.4	Persons having 'no preference' were coded as 'blank'. The variable will be improved during the next revision of the questionnaire (then implementing the IESS Framework Regulation).
Ireland			
compulsory	TEMPREAS	33.7	Not stated answers arise from respondents. Non-response is rising fast. Any other reason behind it?
compulsory	AVAIREAS - employed	94.6	Not collected for people in employment.
compulsory	AVAIREAS - not employed	14.4	
compulsory	REGISTER	100	Not currently collected.
compulsory	WSTAT1Y	100	Not currently collected.
compulsory	COUNTR1Y	100	Not currently collected.
compulsory	REGION1Y	C	
compulsory	INCDECIL	58.6	Question only asked to direct respondents due to sensitive nature of question.
compulsory	HATYEAR	14.6	
optional	COURPURP	100	Not stated answers arise from respondents.
optional	COURFILD	100	Not currently collected.
optional	COURWORH	100	Not stated answers arise from respondents.
Greece			
compulsory	TEMPREAS	12.6	In the Greek questionnaire, there is the (residual) answer category 'Did not specify the reason' (which is converted in 'No answer'). However, as non-response varies considerably across areas, recommendations have been given to staff and interviewers in order to get more accurate answers.

Variable status	Identifier	2020	Short comments on reasons for non-available statistics and prospects for future solutions
compulsory	AVAIREAS - employed	18.5	In the Greek questionnaire, there is the (residual) answer category 'Did not specify the reason' (which is converted in No answer'). However, as non-response varies considerably across areas, recommendations have been given to staff and interviewers in order to get answers that are more accurate.
compulsory	INCDECIL	11.7	It is a sensitive question, in which people tend to refuse to answer. In order to reduce non-response the 2019 questionnaire also includes income bands and as a result, the non-response decreased.
Spain			
compulsory	TEMPREAS	10.0	
compulsory	AVAIREAS - employed	16.3	The question is not asked to people working in an informal job, or with a temporary employment agency contract.
compulsory	AVAIREAS - not employed	13.0	People aged 15.
optional	COURPURP	100.0	People aged 15.
optional	COURFILD	17.0	People aged 15.
optional	COURWORH	17.0	Not provided.
France		100.0	
compulsory	TEMPREAS	11.4	Question is not asked to people with no employment agreement.
compulsory	PRESEEK	41.3	PRESEEK is not asked in the French LFS questionnaire. However, this variable is rebuilt for people who have been seeking a job for one year or less; Indeed, information are available in the questionnaire regarding the situation at each of the last twelve months and regarding the date since people have been seeking a job.
compulsory	REGISTER	15.8	Information is currently not available for people over 65.
compulsory	COUNTR1Y	17.0	Question is not asked to people under 15.
optional	COURPURP	11.5	Question is not asked to people over 65.
Croatia			
compulsory	SIZEFIRM	15.5	People do not know information on number of persons working at the local unit. In order to reduce non-response, interviewers will be instructed to further emphasize the possible selection between codes 14 (Do not know but less than 11 persons) or 15 (do not know but more than 10 persons) which respondents can choose in case of non-response.
compulsory	LOOKREAS	21.8	Will be improved in the future.
compulsory	AVAIREAS - employed	90.0	Will be improved in the future.
compulsory	AVAIREAS - not employed	18.2	Will be improved in the future
compulsory	INCDECIL	24.1	People do not want to give an answer on this sensitive issue especially in the case of proxy interview.
optional	COURFILD	100.0	Optional. Will not be collected.
Italy			
compulsory	COUNTR1Y	11.3	Item non-response is due to people aged less than 15 years, for which this information is not collected in the national questionnaire.
Cyprus			
compulsory	TEMPAGCY	C	There are no temporary agencies in Cyprus.
Latvia			
compulsory	WSTAT1Y	10.1	Persons aged 75+ were not interviewed.
optional	MAINSTAT	10.1	Persons aged 75+ were not interviewed.
Lithuania			
compulsory	INCDECIL	18.2	

Variable status	Identifier	2020	Short comments on reasons for non-available statistics and prospects for future solutions
optional	COURPURP	100.0	Variable is not collected because it is optional.
optional	COURFILD	100.0	Variable is not collected because it is optional.
optional	COURWORH	100.0	Variable is not collected because it is optional.
Luxembourg			
compulsory	AVAIREAS - not employed	15.6	Due to proxy
compulsory	NEEDCARE	24.4	
compulsory	REGISTER	12.8	Due to proxy
compulsory	HATYEAR	11.0	
optional	COURPURP	95.0	
optional	COURFILD	100.0	
optional	COURWORH	95.0	
Hungary			
compulsory	WSTAT1Y	12.4	There is an upper-age limit (74 years) in HU-LFS for this variable.
optional	MAINSTAT	12.4	There is an upper-age limit (74 years) in HU-LFS for this variable.
Malta			
compulsory	AVAIREAS - employed	90.8	Further analysis in the future will be carried out to ensure non-response rate.
compulsory	COUNTR1Y	C	
optional	COURFILD	100.0	Not collected.
optional	COURWORH	100.0	Not collected.
Netherlands			
compulsory	TEMPREAS	32.9	Mostly due to questionnaire related matters.
compulsory	STAPROPR	59.7	Mostly due to questionnaire related matters.
compulsory	NACEPR2D	65.7	Mostly due to questionnaire related matters.
compulsory	ISCOPR3D	77.6	Mostly due to questionnaire related matters.
compulsory	AVAIREAS - not employed	36.4	Mostly due to questionnaire related matters.
compulsory	PRESEEK	72.2	Mostly due to questionnaire related matters.
compulsory	WSTAT1Y	14.5	Mostly due to questionnaire related matters.
compulsory	NACE1Y2D	12.7	Mostly due to questionnaire related matters.
compulsory	HATYEAR	10.5	Mostly due to questionnaire related matters.
optional	COURWORH	13.7	Mostly due to questionnaire related matters.
Poland			
compulsory	INCDECIL	69.7	Very sensitive variable which makes it possible for respondent not to answer this question.
Portugal			
compulsory	INCDECIL	11.3	Corresponds to non-response of the employees who did not give an answer to the income variable.
optional	COURPURP	100.0	This variable does not exist in PT national questionnaire.
optional	COURFILD	100.0	The optional variables were not included in our national questionnaire in order to reduce the response burden and keeping the quality of answers of the compulsory variables.
optional	COURWORH	100.0	The optional variables were not included in our national questionnaire in order to reduce the response burden and keeping the quality of answers of the compulsory variables.
Slovenia			
compulsory	MARSTAT	14.2	
compulsory	WAYJFOUN	14.1	Due to proxy.
compulsory	NACEPR2D	53.0	Due to proxy.
compulsory	ISCOPR3D	53.3	Due to proxy.

Variable status	Identifier	2020	Short comments on reasons for non-available statistics and prospects for future solutions
compulsory	AVAIREAS - employed	100.0	
optional	COURFILD	100.0	Not collected as optional variable.
Finland			
compulsory	WSTAT1Y	23.1	Information concerning the year before has obviously not been available.
compulsory	COUNTR1Y	43.4	Information concerning the year before has obviously not been available.
compulsory	HATYEAR	10.3	
optional	COURFILD	100.0	Not collected as optional variable.
Sweden			
compulsory	AVAIREAS - employed	69.5	The high item non-response is due to employed people who do not look for another job (AVAIREAS=blank).
compulsory	REGISTER	17.5	The question is not given to employed people who are not searching for a job.
compulsory	WSTAT1Y	58.8	
compulsory	HATYEAR	19.9	Information for HATYEAR is taken from registers and the share of missing values is about 20%.
optional	COURPURP	100.0	Not collected as optional variable.
optional	COURFILD	100.0	Not collected as optional variable.
optional	COURWORH	100.0	Not collected as optional variable.
Iceland			
compulsory	TEMPREAS	85.6	
compulsory	TEMPAGCY	C	
compulsory	LOOKREAS	24.8	
compulsory	STAPROPR	65.4	
compulsory	NACEPR2D	66.0	
compulsory	SEEKREAS	32.1	
compulsory	AVAIREAS - employed	95.4	
compulsory	AVAIREAS - not employed	81.7	
compulsory	NEEDCARE	89.9	
compulsory	NACE1Y2D	28.0	
compulsory	COUNTR1Y	21.2	
compulsory	HATFIELD	27.9	
optional	COURFILD	100.0	
Norway			
compulsory	WAYJFOUN	30.7	
compulsory	FTPTREAS	23.9	Due to proxy.
compulsory	TEMPREAS	10.2	
compulsory	STAPROPR	19.3	
compulsory	NACEPR2D	100.0	
compulsory	ISCOPR3D	100.0	
compulsory	SEEKREAS	26.3	Due to proxy.
compulsory	AVAIREAS - employed	23.1	Due to proxy.
compulsory	AVAIREAS - not employed	13.1	
compulsory	PRESEEK	26.0	Due to proxy.
compulsory	REGISTER	100.0	
compulsory	COUNTR1Y	100.0	We do not deliver this variable.

Variable status	Identifier	2020	Short comments on reasons for non-available statistics and prospects for future solutions
compulsory	REGION1Y	C	
compulsory	INCDECIL	100.0	The incgross will be implemented in the new LFS design of 2021, and reporting to Eurostat from 2022 onwards.
optional	COURPURP	100.0	We do not deliver this variable.
optional	COURFILD	16.9	Difficulties in coding.
optional	COURWORH	100.0	We do not deliver this variable.
Switzerland			
compulsory	TEMPREAS	26.0	A considerable amount of respondents has indicated 'other reasons' (without specification). As TEMPREAS does not have such a residual category, these respondents have to be coded 'blank'.
compulsory	HATYEAR	17.4	Filter problem. Adaptation planned.
optional	WAYMORE	41.4	Filter/codification error. No adaptation planned, as WAYMORE will be deleted from the LFS by 2021.
optional	COURFILD	100.0	Not asked in the CH-LFS.
optional	COURWORH	100.0	Not asked in the CH-LFS.
North Macedonia			
compulsory	PRESEEK	100.0	This variable is planned to be introduced in the future.
compulsory	REGISTER	17.7	Information is not collected for persons who are not registered in employment agency because they cannot apply for benefit.
compulsory	COUNTR1Y	16.7	Information not collected for people aged 80 years and more.
compulsory	HATFIELD	14.0	
Serbia			
compulsory	INCDECIL	37.5	Lack of information due to reluctance of respondents to reveal their personal earnings. Proxy interviews. Part of this item non-response relates to the employees who have not yet received salary/wage because they have just started to work. Data is unweighted.
Turkey			
compulsory	TEMPAGCY	100.0	This variable is not asked since temporary working agencies are not common in Turkey for the moment.
compulsory	REGISTER	100.0	This question is not asked since the coverage of unemployment benefits is very limited in Turkey (around 10% of registered unemployed are receiving unemployment benefits at the current situation).
optional	COURPURP	100.0	Questions about attending any courses, seminars, conferences or receiving private lessons or instructions outside the regular education system haven't been asked since 2014.
optional	COURFILD	100.0	Questions about attending any courses, seminars, conferences or receiving private lessons or instructions outside the regular education system haven't been asked since 2014.
optional	COURWORH	100.0	Questions about attending any courses, seminars, conferences or receiving private lessons or instructions outside the regular education system haven't been asked since 2014.

Note: 'C' All records have the same value.

10.2 Country codes

Geographical aggregates and country codes

EU	European Union
BE	Belgium
BG	Bulgaria
CZ	Czechia
DK	Denmark
DE	Germany
EE	Estonia
IE	Ireland
EL	Greece
ES	Spain
FR	France
HR	Croatia
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
IS	Iceland
NO	Norway
CH	Switzerland
ME	Montenegro
MK	North Macedonia
RS	Serbia
TR	Turkey

Quality report of the European Union Labour Force Survey 2020

The purpose of this quality report is to provide the users of the European Union Labour Market Statistics with a tool for assessing the quality of these statistics which are based on the European Union Labour Force Survey. It provides a brief description of the survey and a summary of the main quality indicators which are: relevance, accuracy, accessibility and clarity, timeliness and punctuality, comparability, and coherence. The quality report is updated annually.

For more information
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