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# Income and living conditions (ilc)

Reference Metadata in Single Integrated Metadata Structure (SIMS) Compiling agency: Eurostat, the statistical office of the European Union

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For any question on data and metadata, please contact: Eurostat user support

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1. Contact		<u>Top</u>
1.1. Contact organisation	Eurostat, the statistical office of the European Union	
1.2. Contact organisation unit	Unit F4 - Income and living conditions; Quality of life	
1.5. Contact mail address	2920 Luxembourg LUXEMBOURG	

# 2. Metadata update

12/12/2023	
2.1. Metadata last certified	12/12/2023
2.2. Metadata last posted	12/12/2023
2.3. Metadata last update	12/12/2023

# 3. Statistical presentation

## 3.1. Data description

The European Union Statistics on Income and Living Conditions (EU-SILC) collects timely and comparable multidimensional microdata on income, poverty, social exclusion and living conditions.

The EU-SILC collection is a key instrument for providing information required by the European Semester and the <u>European Pillar of</u> <u>Social Rights</u>, and the main source of data for microsimulation purposes and flash estimates of income distribution and poverty rates. AROPE remains crucial to monitor European social policies, especially to monitor the <u>EU 2030 target on poverty and social</u> <u>exclusion</u>. For more information, please consult <u>EU social indicators</u>.

The EU-SILC instrument provides two types of data:

- Cross-sectional data pertaining to a given time or a certain time period with variables on income, poverty, social exclusion and other living conditions.

- Longitudinal data pertaining to individual-level changes over time, observed periodically over four-or more year rotation scheme (Annex III (2) of 2019/1700).

EU-SILC collects:

- annual variables.
- · three-yearly modules,
- six-yearly modules,
- ad-hoc new policy needs modules,
- optional variables.

The <u>variables collected</u> are grouped by topic and detailed topic and transmitted to Eurostat in four main files (D-File, H-File, R-File and P-file).

The domain '<u>Income and Living Conditions</u>' covers the following topics: persons at risk of poverty or social exclusion, income inequality, income distribution and monetary poverty, living conditions, material deprivation, and EU-SILC ad-hoc modules, which are

structured into collections of indicators on specific topics.

In 2022, in addition to annual data, in EU-SILC were collected: the three yearly module on <u>health</u> and the six yearly module on <u>quality</u> of life.

2022 was the second year of implementation of the new legislation (EU-SILC legislation).

Starting from 2021 onwards, the EU quality reports use the structure of the Single Integrated Metadata Structure (SIMS).

#### 3.2. Classification system

The classifications used in EU-SILC are described in the <u>methodological guidelines and in the description of the target variables</u> in CIRCABC.

The classifications used in the EU-SILC results are based on international systems:

- International Standard Classification of Education (ISCED 2011);
- International Standard Classification of Occupations (ISCO-08);
- Classification of Economic Activities (NACE Rev.2 2008);
- Common classification of territorial units for statistics (NUTS 2);
- SCL Geo Code- Geographical code list:

- The recommendations made by the United Nations in the Canberra Group Handbook on Household Income Statistics are also taken into account.

For more details on the classifications used, please see <u>EU Vocabularies</u>, <u>Statistics explained glossary on classifications</u> or <u>CIRCABC</u>'.

# 3.3. Coverage - sector

Data refers to all private households and individuals living in the private households in the national territory at the time of data collection.

# 3.4. Statistical concepts and definitions

Statistical concepts and definitions for EU-SILC are specified in the EU regulation 2019/1700, EU regulation 2019/2181, and EU regulation 2019/2242. The Regulation and its implementing and delegated acts provide for multiple changes to the EU-SILC data collection starting from 2021.

Countries shall follow the annex of <u>EU regulation 2019/2242</u>, where the list of variables is defined, including their modalities, flags, unit and reference period. A more detailed description of the list of variables as well as information on their implementation are available in the <u>methodological guidelines</u>.

In the Income and Living Condition section, you will find more information about the definitions of the main indicators and concepts used (<u>Category: Living conditions glossary - Statistics Explained (europa.eu</u>)).

## 3.5. Statistical unit

The information collected in EU-SILC pertains to the following types of statistical units: private households and persons living in these households. Annex II of Commission <u>EU regulation 2019/2242</u> defines the specific statistical units per variable and specifies the content of the quality reports on the organization of a sample survey in the income and living conditions domain pursuant to <u>EU regulation 2019/1700</u> of the European Parliament and of the Council.

## 3.6. Statistical population

The target population is the private households and all persons composing these households having their usual residence in the national territory. A private household means a person living alone or a group of persons who live together, providing oneself or themselves with the essentials of living.

# 3.6.1. Reference population

The reference population of EU-SILC is the private households and all persons composing these households having their usual residence in the national territory. A private household means a person living alone or a group of persons who live together, providing oneself or themselves with the essentials of living. All household members are surveyed, but only those aged 16 and older are interviewed. Persons living in collective households and in institutions are generally excluded from the target population.

Most countries follow the standard definitions for *reference population* (except for Estonia, and Sweden) and for *household membership* (except for Belgium, Netherlands, Austria and Poland). The slightly deviation on the reference population definition for Denmark and Finland comes from the use of registers on sample selection.

Annex 2 - Reference population and reference period used, provides a summary of household and membership definition for EU-SILC across countries (please consult Concept 19 or <u>national quality reports</u> for more information).

# 3.6.2. Population not covered by the data collection

The sub-populations that are not covered by the data collection includes those who moved out of the country's territory, those with no usual residence, living in institutions or who have moved to an institution compared to the previous year. For more information, please see the national quality reports or *Annex 2 - Reference population and reference period used (including population not-covered)*.

#### 3.7. Reference area

The data refers to the Member States, Iceland, Norway, Switzerland, United Kingdom, Albania, Bosnia and Herzegovina,

Montenegro, North Macedonia, Serbia, Türkiye and Kosovo<sup>(\*)</sup>; national territory and NUTS II level.

EU-SILC may exclude small parts of the national territory amounting to no more than 2% of the national population and the national territories as defined in Article 6 of <u>EU regulation 2019/2242</u>.

Specific cases of coverage areas are for the following countries:

- France (excluding Mayotte. Four overseas departments (Guadeloupe, Martinique, Guyane, la Réunion) have been included from 2022 data collection),
- Ireland (Including the following offshore islands: Achill, Bull, Cruit, Gorumna, Inishnee, Lettermore, Lettermullan and Valentia),
   Malta (Malta and Gozo),
- Netherlands (Kingdom of the Netherlands excluding overseas territories),
- Cyprus (Government-controlled areas of the Republic of Cyprus).

(\*) This designation is without prejudice to positions on status and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

## 3.8. Coverage - Time

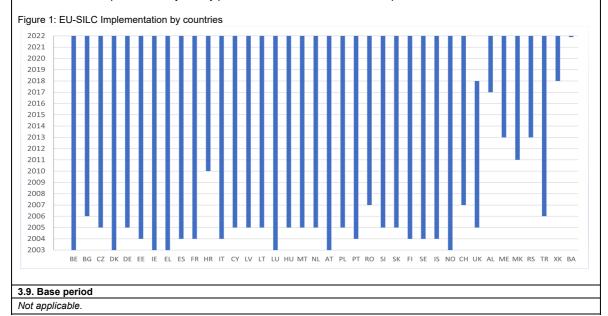
The start of the EU-SILC instrument was in 2004 for the EU-15 (except Germany, the Netherlands, and the United Kingdom), Estonia, Norway, and Iceland.

A derogation was provided in the cases of Germany, the Netherlands and UK and nine of the ten new Member States (all except Estonia). It permitted them to begin in 2005, under the condition that they supply comparable data for the year 2004 for the common EU indicators that have been adopted by the Council in the context of the open method of coordination.

Bulgaria and Türkiye started the full implementation of the EU-SILC instrument in 2006, while Romania and Switzerland launched EU-SILC in 2007.

North Macedonia started in 2010, Croatia in 2011, Montenegro and Serbia in 2013, Albania in 2017, Kosovo in 2018 and Bosnia and Herzegovina in 2022.

The United Kingdom left the EU on 31 January 2020. In the absence of an agreement regarding the transmission of statistical information, the country has ceased to transmit data for EU-SILC. The latest data available for the United Kingdom is EU-SILC 2018. Annex 1- EU-SILC implementation by country provides an overview of the EU-SILC implementation across countries until 2022.



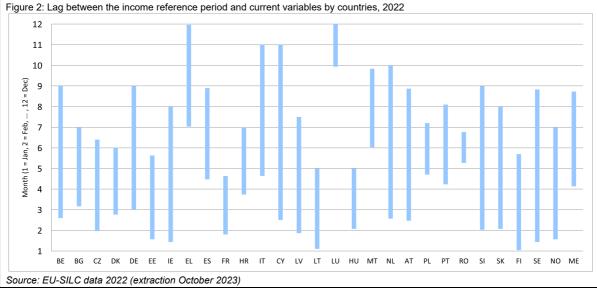
# 4. Unit of measure

The data involves several units of measure, depending on the variable. For more information, see the methodological guidelines and description of EU-SILC target variables available in <u>CIRCABC</u>. Most indicators are reported as shares. Some are reported in other units (e.g., percent, thousands of persons, monetary units, etc.). More information is available in Eurobase, living condition <u>database</u> section.

# 5. Reference Period

The reference period is the survey year. The nucleus or annual variables are collected yearly using the reference period as specified in Annex II of EU regulation <u>2019/2242</u> and as well as in the <u>Methodological guidelines</u>.

For all countries, the reference period for income variables in EU-SILC is the previous calendar year. Ireland, until 2019, collected income information for the 12-month period immediately preceding the sample household's interview date. For most of the countries, the fieldwork was carried out from January until July 2022. The lag between the income variables and the other variables varies across countries (Figure 2).



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ements work for European statistics relating to persons and households based on S) was published in the OJ on 10 October 2019. The Annex to the $\underline{EU}$ e detailed arrangements and content for the quality reports pursuant to EU of the Council and EU regulation 2019/2242.
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S) was published in the OJ on 10 October 2019. The Annex to the EU e detailed arrangements and content for the quality reports pursuant to EU
, Commission implementing regulations, Commission delegated regulations,
amework.
ccess to anonymised microdata for scientific purposes may be granted on the (2009) of the European Parliament and the Council on European statistics.
Тор
24 and Article 20(4)) of 11 March 2009 (OJ L 87, p. 164) stipulates the need to the confidentiality of the data used to produce European statistics and access elopments and the requirements of users in a democratic society. In the Eurostat website.
formation, such as names or addresses, that would allow direct identification. isclosure control and confidentiality of EU SILC microdata when disseminating the collected variables are removed or changed. On the other hand, in order to Ided. For more details, see <u>User Database (UDB)</u> .
<u>ilication</u> as follows: based on fewer than 20 sample observations or if the non-response for the
ey are based on 20 to 49 sample observations or if non-response for the item 0%;
y when they are based on 50 or more sample observations and the item non- eed 20%. ags are used:
(n) Not significant; (p) Provisional; (r) Revised
(s) Eurostat estimate; (u) Low reliability (i.e., due to small sample size).
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are available on the Eurostat website. In addition, statistical articles or working
I ( <u>Publications - Eurostat (europa.eu</u> )). Indicators based on national SILC data puntry. For more information, see the <u>datasets availability table and release</u>

# 8.2. Release calendar access

Please refer to the Release calendar - Eurostat (europa.eu) publicly available on Eurostat's website.

# 8.3. Release policy - user access

In line with the Community legal framework and the <u>European Statistics Code of Practice</u>, Eurostat disseminates European statistics on its website (see section 10 - 'Accessibility and clarity'), respecting professional independence and in an objective, professional and transparent manner in which all users are treated equitably. The detailed arrangements are governed by the <u>Eurostat protocol on impartial access to Eurostat data for users</u>. Additional information about microdata access is available in <u>Statistics on Income and Living Conditions - Microdata</u>.

Countries have provided the link to their national sites on the released calendar when available.

# 9. Frequency of dissemination

Annual

# 10. Accessibility and clarity

# 10.1. Dissemination format - News release

The main results for 2022 are available in the Eurostat website, News articles - Eurostat (europa.eu).

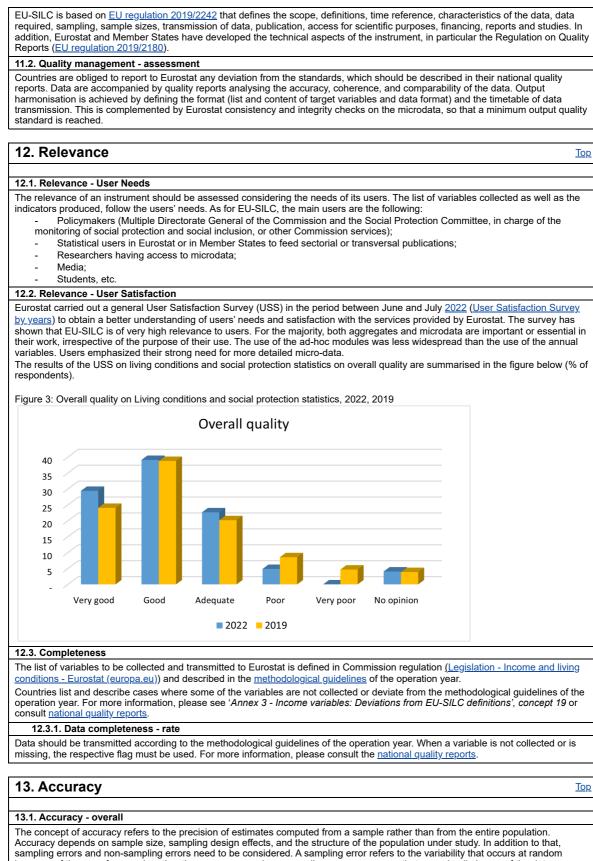
# 10.2. Dissemination format - Publications

The following publications are disseminated in the dedicated EU-SILC section:

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a. Statistical books;
b. Statistics in focus;
c. News releases;
d. Statistical working papers; e. Statistics explained.
Further information can be found on the Eurostat website: <u>Publications - Income and living conditions - Eurostat (europa.eu</u> ).
The main indicators are available in Eurobase, please see the Eurostat website - Income and Living conditions.
10.3. Dissemination format - online database
A detailed description of the indicators available online can be found in the following document: "Working Paper on EU-SILC
datasets" and "European Union Statistics on Income and Living Conditions - Access to microdata - Eurostat (euro12a.eu)".
Please consult Database - Income and living conditions - Eurostat (europa.eu).
10.3.1. Data tables - consultations
Eurostat monitors <u>user behaviour</u> by analysing database extractions for each domain and page views for each dedicated section by
months and years. In this way, Eurostat keeps track of users and their needs by monitoring the website (Starting from 2022, the
website of Eurostat was updated (https://ec.europa.eu/eurostat/)).
10.4. Dissemination format - microdata access
In accordance with EU regulation 557/2013, the Commission has released SILC anonymized micro-data in CIRCABC via encrypted
zip file.
Access to the anonymised EU-SILC microdata is provided by means of research contracts. Access is in principle restricted to
universities, research institutes, national statistical institutes, central banks inside the EU, and the European Central Bank. Individuals cannot be granted direct access. Contact point: estat-microdataaccess@ec.europa.eu. For more details, see access to microdata
and Publications on the basis of European microdata CROS (europa.eu).
10.5. Dissemination format - other
The results of the EU-SILC survey are useful for policymakers and users. For this purpose, Eurostat produces several requests in table format. In addition, as part of different workshops or conferences, EU-SILC data are useful for drafting papers for such
purposes.
For more information, please consult Eurostat website: https://ec.europa.eu/eurostat.
10.5.1. Metadata - consultations
Eurostat consults Member States on metadata guidelines and the new metadata structures before implementation.
10.6. Documentation on methodology
Quality reports as well as the list of variables collected and transmitted to Eurostat (cross-sectional and longitudinal), refer to the
main document of the respective operation year in CIRCABC: Methodological guidelines and description of EU-SILC target variables.
More information about EU-SILC is provided in EU-SILC Methodology; EU statistics on income and living conditions (EU-SILC)
methodology; and <u>Glossary: EU statistics on income and living conditions (EU-SILC);</u>
Detailed description of the indicators calculation: <u>Methodological Paper on EU-SILC datasets</u> . The files are transmitted following the transmission guidelines.
Starting from 2021, EU-SILC follows the IESS regulation: EU regulation 2019/1700, establishing a common framework for European
statistics relating to persons and households, considering granted derogations (EU decision 2020/2050).
EU-SILC 2022 implementation follows the EU regulation on:
<ul> <li>titles of the variables, for the income and living conditions domain, <u>EU regulation 2020/258</u>.</li> </ul>
<ul> <li>arrangements and content of the quality reports for the income and living conditions domain, <u>EU regulation 2019/2242</u>.</li> </ul>
As well, the following regulations are common for all the surveys:
- the technical characteristics of the statistical populations and observation units, descriptions of variables and of the
<ul> <li>statistical classifications, <u>EU regulation 2019/2181</u>.</li> <li>data collections for all domains from 2021 until 2028, <u>EU regulation 2020/256</u>.</li> </ul>
<ul> <li>the structure of quality reports related to datasets to be transmitted by EU Member States to Eurostat, <u>EU regulation</u></li> </ul>
For more information, please see the Eurostat website on EU-SILC legislations.
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Countries, based on EU-SILC data, provide the annex - metadata on benefits useful for Euromod. The annex on the metadata of the
income benefits is collected for EUROMOD-purposes, and it is shared only with the UDB users (not published with the quality report).
More information about EUROMOD can be found on the respective website: <u>EUROMOD - Tax-benefit microsimulation model for the</u>
European Union (europa.eu).
10.6.1. Metadata completeness - rate
All the elements required in the SIMS are provided. Therefore, the metadata completeness rate is 100%.
10.7. Quality management - documentation
The document on the description of the variables to be implemented in the operation year, quality report guidelines or other
supportive documents are stored in CIRCABC.
The <u>quality report guidelines</u> , which describe and support countries in filling in their national quality reports, is updated yearly. Countries implement EU-SILC following the methodological <u>quidelines and the description of the EU-SILC target variables</u> . Using the
same methodology and list of variables increases comparability across countries.
The national quality reports follow Annex IV of the EU regulation 2019/2242 as well as the SIMS guidelines and annexes template.
The <u>SAS codes</u> to calculate the main tables used in national quality reports are available for countries and stored in CIRCABC.
Please consult the <u>EU</u> and <u>national quality reports</u> for more information.
11 Quality management
11. Quality management   Image: Dep d
11.1. Quality assurance



sampling errors and non-sampling errors need to be considered. A sampling error refers to the variability that occurs at random because of the use of a sample rather than a census, and non-sampling errors are errors that occur in all phases of the data collection and production process. From 2021

<u>EU regulation 2019/1700</u> foresees the requirements relating to geographical coverage, detailed sample characteristics, including subsampling, in accordance with Annex III, common data gathering periods, common standards for editing and imputation, weighting, estimation and variance estimation.

More specifically, Annex II - Precision requirements, foresees the following:

- 1. Precision requirements for all data sets are expressed in standard errors and are defined as continuous functions of the actual estimates and of the size of the statistical population in a country or in a NUTS 2 region.
- 2. The estimated standard error of a particular estimate must not be bigger than the following amount:

3. The function shall have the form of .

The following values for parameters shall be used:			
Ratio at-risk-of-poverty or social exclusion to population	Number of private households in the country in millions, rounded to 3 decimal digits	900	2600
Ratio of at-persistent-risk-of- poverty over four years to population	Number of private households in the country in millions, rounded to 3 decimal digits	350	1000
	Number of private households in the NUTS 2 region in millions, rounded to 3 decimal digits	600	0

When countries obtain negative f(N) values with the parameters expressed above, they shall be exempt from the corresponding requirement.

(\*) For the estimated ratio at-risk-of-poverty or social exclusion to population in each NUTS 2 region, those requirements are not compulsory for NUTS 2 regions with less than 0,500 million inhabitants, provided that the corresponding NUTS 1 region complies with this requirement. NUTS 1 regions with fewer than 100 000 inhabitants are exempt from the requirement.

## Before 2021

According to <u>EU regulation 1982/2003</u> on sampling and tracing rules, for all components of EU-SILC (whether survey or registerbased), the cross-sectional and longitudinal (initial sample) data were to be based on a nationally representative probability sample of the population residing in private households within the country, irrespective of language, nationality or legal residence status. The sampling frame and methods of sample selection ensured that every individual and household in the target population was assigned a known and non-zero probability of selection.

<u>EU regulation 1177/2003</u> defined the minimum effective sample sizes to be achieved, i.e., the actual sample sizes had to be larger to the extent that the design effect exceeds 1.0 and to compensate for all kinds of non-response. Furthermore, the sample size referred to the number of valid households which were households for which (and all respective household members), all or nearly all the required information had been obtained. The allocation of the effective sample size was done according to the size of the country and ensuring minimum precision criteria for the key indicator at national level (absolute precision of the at-risk-of-poverty rate of 1%).

## 13.2. Sampling error

EU-SILC is a complex survey involving different sampling designs in different countries. In order to harmonize and make sampling errors comparable among countries, a "linearization" technique coupled with the "ultimate cluster" approach for variance estimation is applied.

Linearization is a technique based on the use of linear approximation to reduce non-linear statistics to a linear form, justified by the asymptotic properties of the estimator. This technique can encompass a wide variety of indicators, including EU-SILC indicators. The "ultimate cluster" approach is a simplification consisting of calculating the variance by considering only variation among Primary Sampling Unit (PSU) totals. This method requires the first-stage sampling fractions to be small, which is nearly always the case. This method allows a great flexibility and simplifies the calculation of variances. It can also be generalized to calculate the variance of the differences from one year to another.

The main hypothesis on which the calculations are based is that the "at risk of poverty" threshold is fixed. According to the characteristics and availability of data for different countries, we have used different variables to specify strata and cluster information.

Countries have been split into three groups:

1) BE, BG, CZ, IE, EL, ES, FR, HR, IT, LV, HU, PL, PT, RO, SI and RS, whose sampling design could be assimilated to a two-stage stratified type, we used DB050 (primary strata) for strata specification and DB060 (Primary Sampling Unit) for cluster specification. 2) DK, DE, EE, CY, LT, LU, NL, AT, SK, FI, and CH whose sampling design could be assimilated to a one-stage stratified type we used DB050 for strata specification and DB030 (household ID) for cluster specification.

3) MT, SE, IS and NO, whose sampling designs could be assimilated to simple random sampling, we used DB030 for cluster specification and no strata.

Countries provide the sampling error for incomes and the standard error. Standard errors of key indicators are commonly used as a measure of the reliability of data collected through sample survey. EU-SILC was designed to provide measure of the at-risk-of-poverty rate with an absolute precision of about one point. The sample sizes were defined considering this accuracy requirement. Member States compute variance estimates for the main indicators; linearization, jackknife and bootstrap techniques are programmed. For further information, please consult the <u>EU and national quality reports</u>.

#### 13.2.1. Sampling error - indicators

The concept of accuracy refers to the precision of estimates computed from a sample rather than from the entire population. Accuracy depends on sample size, sampling design effects and the structure of the population under study. In addition to that, sampling errors and non-sampling errors need to be considered. Sampling error refers to the variability that occurs at random because of the use of a sample rather than a census and non-sampling errors are errors that occur in all phases of the data collection and production process.

This section describes the closeness of computations or estimates to the exact or true values that the statistics were intended to measure (accuracy) and the closeness of the initial estimated value to the subsequent value (reliability).

Annex 4-Sampling errors shows the estimates for the leading indicator "People at-risk of poverty or social exclusion (AROPE)" and its components, namely: At-risk of poverty rate, persistent-risk-of-poverty, people living in households with very low work intensity and severe material deprivation rate.

Some of the countries use additional national data to get more precise estimates for the main indicators (BE, LV, LT, HU, MT, AT, FI, and SE).

# 13.3. Non-sampling error

Non-sampling errors are basically of four types:

Coverage errors: errors due to divergences existing between the target population and the sampling frame.

- Measurement errors: errors that occur at the time of data collection. There are several sources for these errors, such as the survey instrument, the information system, the interviewer, and the mode of collection
- Processing errors: errors in post-data-collection processes such as data entry, keying, editing, and weighting. Non-response errors: errors due to an unsuccessful attempt to obtain the desired information from an eligible unit. Two main types of non-response errors are considered:

Unit non-response refers to the absence of information for the whole units (households and/or persons) selected into the sample.

Item non-response refers to the situation where a sample unit has been successfully enumerated, but not all the required information has been obtained.

Normally, these errors are faced at the national level. Specific cases are described in the national quality reports

# 13.3.1. Coverage error

Coverage errors are caused by the imperfections of the sampling frame for the target population of the survey. Coverage errors include over-coverage (units wrongly classified while they are out of scope or do not exist), under-coverage (units not included in the sampling), and misclassification (incorrect classification of units belonging to the target population).

In EU-SILC, two main groups can be defined in terms of the sampling source used. Some countries have relied on household information from population registers. Other countries have used census databases to select addresses. In order to get the best coverage, both sources need to be updated.

A systematic source of coverage problems is the time lag between the reference date for the selection of the sample and the fieldwork period, which should be as short as possible. In addition, some countries carried out EU-SILC as a subsample of the units (addresses) that successfully answered other existing surveys. Assuming selective non-response in these surveys, this may entail selection bias (under-coverage).

# 13.3.1.1. Over-coverage - rate

Over-coverage: related either to wrongly classified units that are in fact out of scope, or to units that do not exist in practice. More details on this topic can be found consulting the national quality reports.

# 13.3.1.2. Common units - proportion

Not applicable

### 13.3.2. Measurement error

Generally, measurement errors arise from the questionnaire, the interviewer and the data collection method used. The most frequently reported measurement errors on which information is given by countries in their national quality reports are the following:

- questionnaire (design, content, and wording);
- mode of data collection;
- training of interviewers or interviewers' errors at the stage of collecting information;
- respondents' misunderstanding of questions and inaccurate, sometimes false answers; and
- quality control with re-interviews and record check studies.
- More details on this topic are available in the national quality reports.

## 13.3.3. Non response error

Non-response errors are errors due to an unsuccessful attempt to obtain the desired information from an eligible unit. Two main types of non-response errors are considered: unit non-response and item non-response

## 13.3.3.1. Unit non-response - rate

Unit non-response relates to when a household refuses to cooperate or is away during the fieldwork period. Other reasons can explain unit non-response: the questionnaire is lost; the household is unable to respond because of incapacity or illness. It may also happen that a person in a household refuses to cooperate, although the household interview has been accepted ('individual' nonresponse). Countries have increased the sample in cases of high non-response for the first wave or in cases where there was an increase in the number of the rotations used.

Commission regulations define indicators aimed at measuring unit non-response in EU-SILC: address contact rate (Ra), household response rate (Rh), individual response rate (Rp). In addition, models must be used to correct non-responses. Most of the countries apply either a standard post-stratification based on homogeneous response groups or a more sophisticated logistic regression model. Individual non-response rate appears to be marginal and most of the countries impute missing individual questionnaires. More information about the contact rate and response rate is provided in the 'Annex 5 - Sampling size, rotation and non-response rate'.

#### 13.3.3.2. Item non-response - rate

Item non-response refers to the situation where a sample unit has been successfully enumerated, but not all the required information has been obtained.

Item non-response, which typically happens when the interviewee, does not answer a question because they consider it personal, too sensitive, or not easily understandable.

Item non-response is high for some income components, and it has been addressed with imputation. The technique aims at 'filling the holes' in a distribution, only unit non-response can be assumed. The computation of item non-response is essential to fulfilling the precision requirements. In national quality reports, item non-response rate is provided for the main income variables both at the household and personal level. In cases where a record is imputed for a specific variable, this will be reflected in the variable flags

## 13.3.3.2.1. Item non-response rate by indicator

In the national quality reports, information on the imputation of households and personal incomes is provided. The imputation process is done at the national level and is described in the national quality reports.

## 13.3.4. Processing error

Processing error describes an error generated during data collection. The household and individual follow-up rules and the tracking rules should be applied in accordance with Article 8 of EU regulation 2019/2242. In the national quality reports, countries should describe the errors generated due data editing, data entry and imputation (Article 9, EU regulation 2019/2242). Some errors are detected by the data-checking process applied by Eurostat. These checks include structural, logical checks, year to year comparisons and descriptive statistics. It also detects easy errors related to wrong identifiers, modalities, flags, outliers, consistency, etc.

# 13.3.5. Model assumption error

Countries, in their national quality reports, describe the methods and models (when available) used to treat specific sources of errors and the way that they deal with these errors. Calibration is often used to treat such errors.

# 14. Timeliness and punctuality

# 14.1. Timeliness

IESS (EU regulation 2019/1700) establishes the timeliness of data transmissions from the national statistical institutes. In the first years of implementing the IESS regulation, some of the countries were granted a new deadline for data submission as specified in the annex to EU regulation 2020/2050.

Pursuing Annex V of the IESS regulation, Member States shall submit for the Income and Living Conditions' domain pre-checked microdata without direct identifiers, according to the following deadlines:

(a) Variables for the data collection of year N should be transmitted by the end of the year N (cross-sectional and longitudinal variables, cross-sectional weights), but in exceptional cases, provisional microdata concerning income may be transmitted by the end of year N and revised data by 28 February of the year N+1;

(b) Variables related to the observation covering the years of the rotation scheme ending in year N (longitudinal weights), should be transmitted by 31 October of the year N+1.

According to the regulation, the aggregated data will be published on the Eurostat website as soon as possible and within six months of the transmission deadline for annual and infra-annual data collection, and within 12 months of the transmission deadline for other data collection, save in duly justified cases.

## 14.1.1. Time lag - first result

Indicators based on national SILC data are published as soon as Member States' data are validated. For EU-SILC 2022 data collection, the following deadlines were applied:

- Mid-June of the year N: Complete set of data relating to year N-1 (excl. longitudinal weights);
- End of September of the year N: the user database (scientific use files released to researchers);

- Mid-October of the year N: complete set of data relating to year N-1 (incl. longitudinal weights).

For more information, please consult the released calendar on the Eurostat website.

#### 14.1.2. Time lag - final result

Considering the deadlines described in Concept 14.1, the final data are published after they are checked and validated by Eurostat. 14.2. Punctuality

Punctuality includes the time lag between the actual delivery of the data and the target date when it should have been delivered. For 2022, most of the countries were able to meet the deadline. Please consult the <u>EU quality reports</u>.

# 14.2.1. Punctuality - delivery and publication

Data were checked, validated, and disseminated as soon as they are received from countries.

# 15. Coherence and comparability

# 15.1. Comparability - geographical

To ensure comparability of data and/or indicators, i.e., to ensure quality of data as defined by Eurostat, EU-SILC has adopted an exante output harmonization strategy. When using output harmonization survey design and methods are flexible as long as the output requirements are met. Countries have to define suitable national concepts and measurement procedures with which the international concept can be portrayed. There are two different strategies depending on when the survey design is planned: with ex-ante harmonization, the surveys are created by the countries having in mind the output to produce; with ex-post harmonization, countries can adapt surveys already in place to produce comparable outcomes.

The EU-SILC common framework aims at ensuring standardisation at different levels. Conceptual standardisation is achieved because the common concepts/definitions underlying each measure/variable, the scope and time reference are defined and documented

Implementation and process standardisation is achieved by editing data to ensure that recommendations are followed concerning collection unit, sample size to be achieved for each country, a recommended design for implementing EU-SILC (rotational panel), common requirements for sampling and tracing rules for the longitudinal components, common requirement for imputation and weighting procedures. International classifications aiming at maximising comparability of the information produced are also enforced. Specific fieldwork aspects are also controlled by the framework: to limit the use of proxy interviews, to limit the use of controlled substitutions, to limit the interval between the end of the income reference period and the time of the interview, to limit to the extent for the total fieldwork of one-shot surveys, to define precise follow up rules of individuals and households in case of refusals, to limit noncontact. Eurostat and Member States work together to develop common guidelines and procedures aimed at maximising comparability.

The EU-SILC survey design is *flexible*. EU-SILC flexibility is a key aspect allowing for adaptation to national specificities in terms of infrastructure and measurement. The most important element of the flexibility is related to the data sources (administrative or interview) to be used. Eurostat encouraged the use of existing ones, whether they are surveys or registers. À second aspect of the flexibility is related to the survey and sampling design. The only constraint is that, for both, the cross-sectional and longitudinal components, all household and personal data have to be linkable at micro level. Countries can use survey vehicles already in place, set up a new survey possibly drawing on one recommended by Eurostat. Sampling design can draw on expertise for social surveys at national level. The third element of flexibility relates to the measure of self-employment income for which the diversity of the sources and practices did not allow to find common harmonised solutions.

15.1.1. Asymmetry for mirror flow statistics - coefficient

#### Not applicable.

#### 15.2. Comparability - over time

Since 2005, comparability over time is ensured by a common data source (EU-SILC). Due to transition between end-ECHP (European Community Household Panel) and the start of the EU-SILC, there are further disruptions in series between 2001 and 2005

Starting from 2020 and mostly from 2021, many countries were impacted partly or fully by breaks in time series (Germany, Ireland, France, Luxembourg, Malta, Slovenia, Finland, Sweden, and Norway).

In 2021, a new legislation on the implementation of EU-SILC came into force; revising and improving the survey (see section 3.4). The new legislation provided for multiple changes to EU-SILC data collection, in particular:

It enforced the need for the following improvements: improved timeliness, with shorter deadlines for EU-SILC data submission; reformulated precision requirements at national and regional level (NUTS2) for the at-risk-of-poverty-or social-exclusion indicator and the persistent-risk-of-poverty rate;

additional/ changed EU-SILC variables;

data collection in three frequencies: nucleus, three-year module and six-year module, and the recommendation to extend the longitudinal panel.

The IESS implementation, the COVID-19, the changes to the sample, method of interview, number of rotations used, etc., influenced specific variables, indicators, or the national SILC. For some of the countries the impact was not related to COVID-19 or implementation of IESS, so the break in series occurred before 2020 (Please see Concept 19).

For detailed information about significant changes and breaks in time series, as well as other changes considered relevant, please see the <u>overview of breaks in series</u> on the <u>Eurostat website</u>.

# 15.2.1. Length of comparable time series

EU-SILC provides comparable results across years. Countries implement EU-SILC following the methodological guidelines where modalities and model questions are provided. Nevertheless, specific circumstances (i.e., the impact of COVID-19, moving to a larger rotation scheme, changing the mode of data collection, etc.) affected the time series.

These changes are highlighted by countries in their <u>national quality reports</u> as break in series.

For detailed information about significant changes and breaks in time series, as well as other changes considered relevant, please see the <u>overview of breaks in series</u> on the <u>Eurostat website</u>.

## 15.2.2. Comparability and deviation from definition for each income variable

Comparability and deviation from definition for each income variable are provided in the <u>national quality reports</u>. Some of the income variables are not collected (please see Concept 19). For more information, please see the *Annex 3: Income variables - Deviations from EU-SILC definitions*.

#### 15.3. Coherence - cross domain

A comparison with external sources for all income target variables and the number of persons who receive income from each 'income component' are provided where the Member States concerned consider such external data to be sufficiently reliable. The comparisons with other domains are done in national quality reports, mainly with the Household Budget Survey (HBS), the Labour Force Survey (LFS), National Accounts or/and Social Protection Accounts. In addition, some countries compared the data with administrative sources or with other sources.

The sets of weights available in EU-SILC datasets have been obtained using calibration techniques, which ensure the basic coherence of the estimates obtained from EU-SILC micro datasets and demographic counts. Additional information can be found in the <u>national quality reports.</u>

15.3.1. Coherence - sub annual and annual statistics

Not applicable

# 15.3.2. Coherence - National Accounts

Most of the countries provided a comparison of the main target variables with national accounts. The methodological background for comparisons is provided in the <u>Methodological note Comparison of household income: European Union Statistics on Income and Living Conditions and National Accounts</u>. More information is provided in the <u>national quality reports</u>.

## 15.4. Coherence - internal

Countries provided information in case a lack of coherence in the EU-SILC data was visible. In 2022, countries did not report any significant inconsistencies in their national quality reports.

# 16. Cost and Burden

EU-SILC was designed to keep respondent burden controlled, to avoid a high non-response rate and to ensure the quality of the information collected. The method of interview significantly impacts the interview duration. The interview duration in 2022 is almost two hours for Croatia and Germany, while for some countries the interview duration per household is less than 30 minutes (Sweden, Latvia, Netherlands, and Montenegro,).

Annex 6 - Mode of data collection and fieldwork, provides more information about the length of interview by country.

# 17. Data revision

## 17.1. Data revision - policy

The general Eurostat revision policy applies to this domain.

# 17.2. Data revision - practice

All reported errors (once validated) result in corrections of the disseminated data.

Reported errors are corrected in the disseminated data as soon as the correct data have been validated.

Data may be published even if they are missing for certain countries or flagged as provisional or of low reliability for some of them.

They are replaced with final data once transmitted and validated. European aggregates are updated accordingly. Whenever new data are provided and validated, the already disseminated data are updated. There is no specific updating schedule for incorporating 'spontaneously' provided new data.

Revisions of previously released EU-SILC data may happen in case adjustments are implemented at national level (for example, the availability of new census data) or in other exceptional cases (for examples changes in the indicator definitions or in the EU-SILC methodology).

No substantial country-specific revisions are applied at the national level (the main driver of data revisions being changes that are coordinated within the ESS).

The EU-SILC team promptly shares information on any data revision with the Income and Living conditions Working Group members as well as with the Social Protection Committee – Indicators Sub-Group.

17.2.1. Data revision - average size

Not available.

# 18. Statistical processing

Detailed information concerning the sampling frame, sampling design, sampling units, sampling size, weightings and mode of data collection can be found in the detailed sections (please see below).

# 18.1. Source data

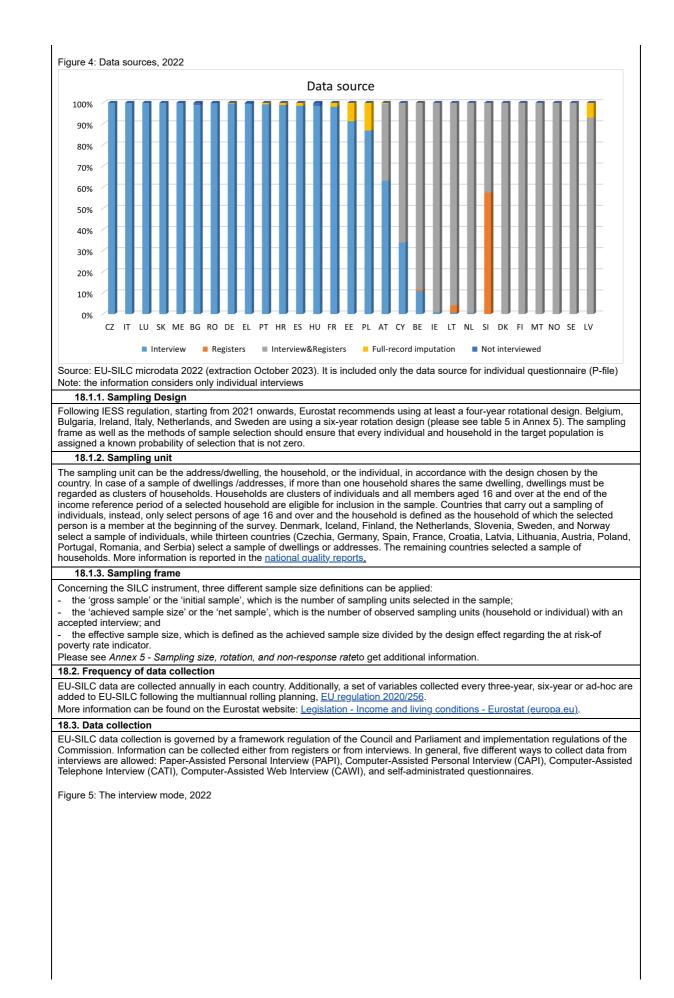
EU-SILC combines survey and administrative data. Most countries use survey and administrative data combined; others use only survey data (e.g., Czechia, Germany, Greece, Croatia, Luxembourg, Hungary, Poland, Portugal, Romania, Slovakia, and Montenegro).

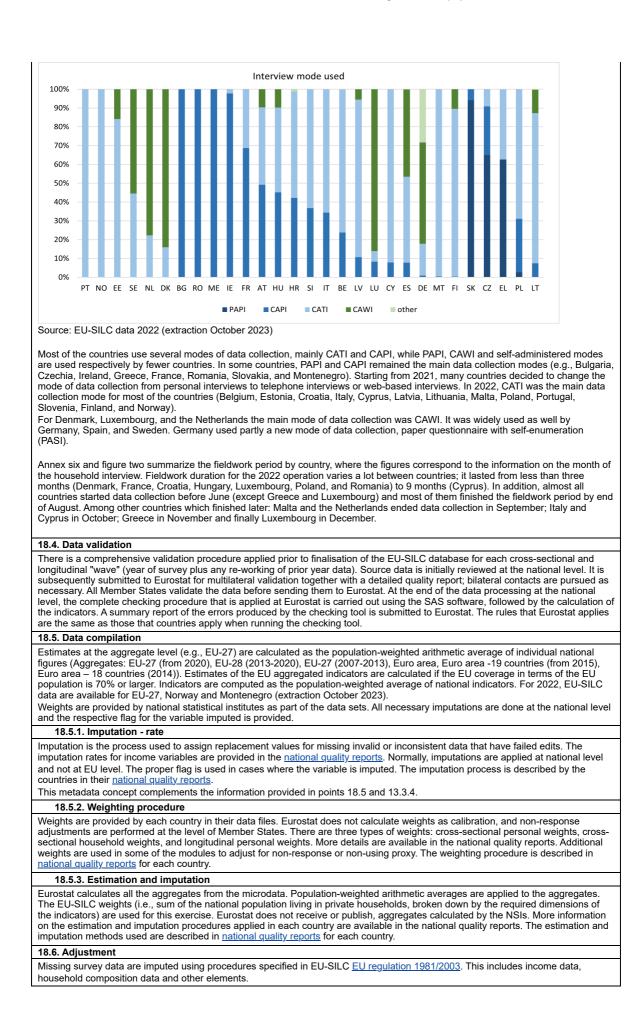
The Framework Regulation calls for the selection of nationally representative probability samples. The data are to be based on a nationally representative probability sample of the population residing in private households within the country, irrespective of language, nationality, or legal residence status.

All private households and all persons aged 16 and over within the household are eligible for the operation. Persons living in collective households and in institutions are generally excluded from the target population.

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18.6.1. Seasonal adjustment

Not applicable.

	issued in the SIMS format for European Union Statistics on Income and Living Conditions.		
	<u>quality</u> reports and <u>national quality reports</u> can be found in CIRCABC or on the <u>Eurostat website</u>		
	es related to the implementation methodology and indicators in Eurobase		
Main topic	2021		
Note about indicators		<i>Household type:</i> For Portugal: The Euros one used by INE and av	
Variables not collected	The income variables not collected: HY070: Romania; HY110: Czechia; HY120: Austria, Luxembourg, Malta, Norway, Switzerland; HY121: Malta; HY170: Belgium, Denmark, France, Ireland, Malta, Netherlands, Austria, Romania, Finland, Sweden, Norway, Switzerland; PY021: Switzerland, Serbia; PY020: Austria, Switzerland; PY030: Malta, Romania	The income variables n HY060: Romania, HY08 Austria; HY121: Estonia Estonia; HY145: Belgiu Hungary, Malta, Nether France, Ireland, Luxem Austria, PY021: Austria	
Differences in the concepts	<ul> <li>Deviation from the standard definitions for reference population: <ul> <li>Bulgaria: all citizens officially living in Bulgarian territory (population de facto).</li> <li>Estonia: persons living in collective households are included in the reference population.</li> <li>Finland: private households and all the persons composing these households refer to the permanent usual residency in Finland at the end (31 December) of the calendar year before the survey year.</li> <li>Portugal: The reference population corresponds to the set of all private households and their current members living in Portugal (Mainland, Açores and Madeira) by the end of 2020.</li> <li>Sweden: The person must be listed in the Swedish population register and be in Sweden for six consecutive months or more. Short-term visits to another country do not shorten the duration of stay in Sweden.</li> </ul> </li> <li>Deviation from the standard definition for household membership: <ul> <li>Netherlands: There are some minor differences in the treatment of special categories like lodgers or people temporarily away (e.g., students). These people are only included as a household member if they are registered at the household's address.</li> <li>Poland includes as household members: persons absent from the household because of their occupation if their earnings are collected to the household's expenditure.</li> <li>Portugal: On the contrary of EU-SILC concept, "Persons absent for long periods, but having household ties: persons working away from home" were not considered as household members if the absence was for more than 6 months; the income obtained from them was considered as a private transfer.</li> </ul> </li> </ul>	Deviation from the Deviation from the Denmark: Per Estonia: perso population. Finland: Thos had a legal domicil population (Municit Sweden: The be in Sweden for s country do not sho Deviation from the Belgium: A sm residence at a priva during the weeken BE-SILC, they belo Netherlands: categories like lodg are only included a households' addret Austria: Perso months. Poland: Perso their earnings are of as members of sur	
Break in series	Norway: persons will be considered as household members if they spend most of their nights at the address of the household. Specifically for each country the break in series description is the following: - <i>Germany</i> : The new integrated German micro-census entered into force in 2020 and the EU-SILC was integrated in it. For the EU-SILC 2020 and 2021, survey was a full multi- mode-design implemented. The COVID-19 crisis had a large impact on data collection	Specifically for each co - <b>France</b> : For the departments (Fren - <b>Luxembourg</b> : In	
	<ul> <li>processes. Due to the COVID-19 crisis, the interviewers were instructed to realize interviews in the form of CATI or CAWI instead of CAPI.</li> <li>Slovenia: In 2021, the sample was increased due to a change in the mode of data collection to Computer Assisted Telephone Interviewing (CATI). The response rate was lower, and the fieldwork period was longer. In 2010, changes applied in the PH030. And in 2011 in the Overcrowding rate (HH030).</li> <li>Sweden: In 2021, the number of questions in the questionnaire used to derive PH030, i.e., GALI, have decreased from four to two questions (previous change in 2014). As well, the new longitudinal estimation procedure uses calibration estimation. To be flagged only longitudinal estimates. The new estimation procedure to compute personal cross-sectional weights for selected respondent (PB060) is expected to have a negligible impact on the comparability. The new longitudinal estimation procedure uses calibration estimation. The new estimation procedure to compute personal cross-sectional weights for selected respondent (PB060) is expected to have a negligible impact on the comparability.</li> <li><i>Norway:</i> In 2021, New weighting routine and as well the new methods for estimating taxes for incomes before social transfers (Impact on HY022, HY023).</li> <li>Some of the countries the break in series were before 2021; <i>Belgium</i> (2019, 2020); <i>Bulgaria</i> (2016), <i>Czechia</i> (2016); <i>Cyprus</i> (2008); <i>Germany</i> (2015, 2020), <i>Denmark</i> (2020); <i>Spain</i> (2008); <i>France</i> (2008, 2020); <i>Ireland</i> (2017, 2020); <i>Hungary</i> (2018); <i>Luxembourg</i> (2020); <i>Sweden</i> (2014, 2017, 2020); <i>North Macedonia</i> (2014). For more information, please see the <u>overview of breaks in series</u> in Eurostat website.</li> <li>The HY022 and HY023 are calculated by new formula (including Net instead of Gross) for the following countries EE and SE.</li> </ul>	higher participation or employees from portal should have as the young and t Luxembourg's e-go - <i>Finland</i> : The var survey years 2019, and common agree sy2020 data files). retirement) and 8 defining permanen data sources were activity status. So, - <i>Sweden</i> : In 2022 from CATI to mixed respondents from 2 telephone interview effects of the chang split-sample experi were compared wit interviews were us the experiment gro have been affected a statistically signif analyses also indio PW191, PH010, PI The HY022 and HY023 (except EE, FI, and SE) For more information, p	

# **Related metadata**

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# Annexes

Annex 1- EU-SILC Implementation

Annex 2 - Reference population and reference period used Annex 3 - Income Variables - Deviations from EU-SILC definitions

Annex 4 - Sampling errors Annex 5 - Sampling size, rotation and non response rate Annex 6 - Mode of data collection and fieldwork