



## METHODOLOGICAL EXPLANATION

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# LABOUR FORCE SURVEY RESULTS

This methodological explanation relates to the data releases:

- Labour Force Survey Results, Slovenia, quarterly (First Release)
- Labour Force Survey Results, Slovenia, annually (First Release)
- Labour Force Survey Results, Slovenia, quarterly (Electronic Release)
- Labour Force Survey Results, Slovenia, annually (Electronic Release)
- Monthly unemployment rate, Slovenia, monthly (Experimental statistics)



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## 1 PURPOSE

The Labour Force Survey is the most comprehensive official household survey in Slovenia. It is aimed to collect data on the situation and changes on the Slovenian labour market. It provides data on size, structure and characteristics of the Slovene labour force and inactive population.

Key statistics are:

- Unemployment rate
- Employment rate
- Number of unemployed persons
- Number of employed persons

## 2 LEGAL FRAMEWORK

- [Annual Programme of Statistical Surveys \(LPSR\)](#) (only in Slovene)
- [National Statistics Act](#) (OJ RS, No. 45/95 and 9/01)
- Regulation (EU) 2019/1700 of the European Parliament and of the Council of 10 October 2019 establishing a common framework for European statistics relating to persons and households, based on data at individual level collected from samples

## 3 UNIT DESCRIBED BY THE PUBLISHED DATA

Unit described by data on labour force survey results is a resident of a private household by measures of activity, sex, age groups, status in employment, groups of occupation, sections of activity and regions.

## 4 SELECTION OF OBSERVATION UNIT

The observation unit is a resident of Slovenia, residing in a private household by measures of activity, sex, age groups, employment status, occupational groups, areas of activity in cohesion regions.

A stratified simple random sample is used. Stratification by type of settlements and NUTS3 regions is used. There are app. 8.000 households included in the sample each quarter.

## 5 SOURCES AND METHODS OF DATA COLLECTION

Labour Force Survey is a rotating panel survey conducted continuously through the year. Each household is interviewed four times according to the rotation pattern 2-(2)-2 (households are interviewed for two consecutive quarters, excluded for two quarters, and included in the survey for another two consecutive quarters).

We obtain data:

- by computer assisted personal interviewing (CAPI) with the help of a portable computer (CAPI) based on the labour force survey (ANP) questionnaire;
- by computer assisted telephone interviewing (CATI) based on the labour force survey (ANP) questionnaire;
- from administrative and other databases outside SURS;
- from SURS' own sources:
  - Persons in employment (DAK);
  - Structure of population (DEM-PREB/ČL) and Socioeconomic characteristics of population and migrants (SEL-SOC);
  - Income of the population (RAVEN\_DOH).

The collected data is thus a combination of data obtained with a survey questionnaire and data from administrative and other databases. Each household is surveyed four times, according to a 2-(2)-2 rotation model (households are surveyed for two consecutive quarters, then they are excluded from the sample for two quarters, and then they are included in the survey for two more consecutive quarters).

Data for the Labour Force Survey are collected by approximately 40 interviewers. It is implemented face to face and by telephone. The first interview is a face-to-face interview at home. All repeated interviews are telephone interviews, if the household has a telephone. If the household does not have a telephone, the interviewer visits it at home.

The observation period is the reference week. Most of the respondents answers refer to this week. The reference week starts with Monday and ends with Sunday. Each quarter has an average of 13 reference weeks. The interviewer visits the household within 14 days after the end of the reference week (exceptionally within 21 days).

Before the beginning of the quarter, each interviewer receives lists showing which households he must visit, which reference week the answers relate to and the period during which he must contact the household. About a week before the start of the survey, each selected person receives a notification letter announcing the arrival of the interviewer or the interviewer's phone call. Attached to the letter is a leaflet with some basic information that we get from the research, the purpose of the research, who it is intended for, etc. is also

described. All households in the last wave receive the notification letter about the last survey.

With the ANP questionnaire, we collect data relating to the following thematic groups:

- demographic data on household members and relationship to the selected person
- possible immigration to Slovenia
- work in the reference week and characteristics of work
- working time and working hours
- other, additional work
- past work experience
- job search and job search methods
- availability for work
- education and participation in education and training
- self-defining status
- health and disability

Every year, a special thematic set of questions (module) is added to the survey, which further illuminates the situation on the labour market. Up to and including 2020, we collected data for the additional set of questions in the 2nd quarter, and from 2021 onwards, we collect data throughout the year, but only in the first wave of interviewing.

<b>Year</b>	<b>Topic</b>
2023	Pensions and labour market participation
2022	Job skills
2021	Labour market situation of migrants and their immediate descendants
2020	Accidents at work and work related health problems
2019	Work organisation and working time arrangements
2018	Reconciliation between work and family life
2017	Self-employment
2016	Young people on the labour market
2015	No ad hoc module
2014	Labour market situation of migrants and their immediate descendants
2013	Accidents at work and other work-related health problems
2012	Transition from work into retirement
2011	Employment of disabled people
2010	Reconciliation between work and family life
2009	Entry of young people into the labour market
2008	Labour market situation of migrants
2007	Work related accidents, health problems and hazardous exposure
2006	Transition from work into retirement
2005	Reconciliation between work and family life
2004	Work organisation and working time arrangements

For data collection, a questionnaire Labour force survey / Aktivno in neaktivno prebivalstvo (ANP) is used.

The majority of data for the LFS survey are obtained with interviewing. Additionally some of the data are also obtained from the administrative sources; e.g. for data on citizenship, country of birth, educational attainment, economic activity, occupation and gross income from the main job.

Due to the Covid-19 situation, the collection was changed in the 2nd and 4th quarter of 2020, as well as in the 1st and 2<sup>nd</sup> quarter of 2021: personal face-to-face (CAPI) data collection was stopped. All surveys were conducted by telephone. As a result, an additional sample was assigned to the regular sample for the first wave. In the notification letter, we asked households for a telephone number through which we later contacted them. With those actions, we ensured that the arrival of responses was comparable to previous quarters.

We obtain data from administrative and other databases outside SURS from:

- Financial Administration of the Republic of Slovenia: income tax and other sources
- Ministry of the Interior: Central Population Register
- Employment Service of Slovenia: unemployment benefits, financial aid, register of unemployed person

## 6 DEFINITIONS

The definitions of employed, unemployed and inactive population are in line with the ILO definitions, harmonised in the EU based on the new Framework regulation 2019/1700.

**Working age population** comprises all persons aged 15 years and over.

**Employed persons** are persons aged 15–89 who during the reference week did any work for pay or profit (in cash or kind) or family gain for at least one hour, including contributing family workers. Persons who were not working but had a job from which they were temporarily absent are also considered employed. Absences include holidays, annual, sick, parental and maternity leave, education or training connected to the job. Seasonal workers absent due to off-season time but performing any kind of work linked to their seasonal work are also listed among employed persons. The same goes for those absent due to other reasons or lay-off if the total duration of absence is 3 months or less.

**Unpaid/contributing family workers** are those who were not in paid employment or self-employment during the reference week, but did some work on the family farm, in the family enterprise or some other kind of family gainful activity; they normally do not receive regular payment.

**Persons in part-time employment** are those who usually work less than 36 hours per week.

**Employees in labour relation** are those who work in an enterprise or organisation, at an individual private entrepreneur (artisan), at a farmer, at a freelance or via public works.

**Employees performing other forms of work** are those who perform contract work, cash in hand work, who work via a student employment office or are trainees.

**Unemployed persons** are those who during the last week prior to the interview:

- did not work (not in paid employment or self-employment and did not do any paid work);
- were actively seeking work (specific steps were taken in the past four weeks to seek paid employment or self-employment);
- were currently available for work (within two weeks).

Persons who had found a job to start later are also included among unemployed persons.

**The labour force** consists of persons in employment and unemployed persons.

**Inactive persons** are those, aged 15 years and over, who are not classified as persons in employment or as unemployed persons.

**Activity rate** represents the labour force as a percentage of the working age population.

**Employment/population ratio** represents persons in employment as a percentage of the working age population.

**Unemployment rate** represents unemployed persons as a percentage of the labour force.

**Long term unemployment rate** represents long term unemployed population (12 months or more) as a share of the total active population.

**Very long term unemployment rate** represents very long term unemployed population (24 months or more) as a share of the total active population.

**Long term unemployment share** is defined as total long term unemployed population (12 months or more) as a share of total unemployed population.

**Persons living in jobless households** are persons aged 0-17 (18-59) living in households where none is working as a share of the whole population in the certain age group. Students aged 18–24 who live in households composed solely of students of the same age group are not included. Data on persons living in jobless households are annual averages.

**Early school leavers not in education or training** is the share of total population of 18-24-year-olds having achieved ISCED level 2 or less (elementary school or less) and not attending education or training.

**Persons with low educational attainment** are shown as educational attainment rate of ISCED level 2 or less (elementary school or less) for adult population by age groups.

**NEET** (neither in employment nor in any education or training) is share of persons aged 15–24 who are not involved in any kind of formal or informal education and who are not in employment, among all young persons in the age group 15–24.

**Transitions in labour market statuses** show quarterly movement of individuals between employment, unemployment and economic inactivity.

Among different transitions the table shows the share and number of unemployed in given quarter (e.g. 4th quarter of 2018) that were unemployed also in the previous quarter (e.g. 3th quarter of 2018). It also shows how many employed persons were unemployed in previous quarter or how many inactive persons remain inactive etc.

An **underemployed** is a person working part-time who would like to work additional hours and is available to do so.

Potentially active or **potential additional labour force** refers to the grouping of two categories within the inactive population: persons available for the labour market but not seeking work and persons seeking work but not immediately available.

## 7 EXPLANATIONS

### 7.1 CLASSIFICATIONS

SKP - Standard Classification of Occupations. For more, see: [Social classifications](#).

SKD - Standard Classification of Activities. For more, see: [Economic classifications](#).

NUTS - Nomenclature of Territorial Units for Statistics. For more, see: [Territorial code lists](#).

KLASIUS - Classification System of Education and Training. For more, see: [Social classifications](#).

### 7.2 DATA PROCESSING

#### DATA EDITING

Data were statistically edited with the combination of systematic corrections and imputation procedures. The following imputation methods were used: logical imputations and hot-deck imputations.



For more, see the general methodological explanations [Statistical data editing](#).

## **WEIGHTING**

With weighting adjustment we want to achieve representatives of the sample, so that the weighted data give us as good population estimates as possible.

The process of weighting depends on the sampling design, the unit non-response rate and available auxiliary variables used for calibration.

The final weight is the product of the sampling weight, the non-response weight and the calibration factor.

## **SEASONAL ADJUSTMENT**

For seasonal adjustment of time series we use the TRAMO/SEATS method. A time series model is set up, and it is revised in detail and corrected about once a year. By using the model, the time series is decomposed into:

- the trend-cycle component (which consists of the trend and cyclical movements over a period longer than one year),
- the seasonal component (which consists of the seasonal effects and the calendar effects; the calendar effects are composed of the working day effect, the leap-year effect, the holiday effect and the Easter effect),
- the irregular component (which consists of random fluctuations and some outliers).

Seasonally adjusted data are original data from which the seasonal and calendar effects are eliminated.

For more, see the general methodological explanations [Seasonal adjustment of time series](#).

## **7.3 INDICES**

Indices are not published.

## **7.4 PRECISION**

In statistical surveys different kinds of errors can occur (e.g. sampling error, non-response error, measurement error) influencing the reliability and accuracy of the statistical results. Errors deriving from the random mechanisms determine the precision and consequently the reliability of the statistical estimates. The precision of the statistical estimate is estimated by calculating the standard error (SE). The Statistical Office of the Republic of Slovenia draws attention to less reliable estimates by flagging them with a special sign.

If the table contains estimated population totals of (continuous) variables, estimated averages of continuous variables or estimated ratios of population

totals of (continuous) variables, publishing limitations are determined by the relative standard errors or the coefficients of variation (CV). In such cases it holds:

If the coefficient of variation (CV) is

- 10% or below ( $CV \leq 10\%$ ), the estimate is reliable enough and is published without limitations;
- between 10% and up to 30% ( $10\% < CV \leq 30\%$ ) the estimate is less reliable and is flagged for caution with letter M;
- over 30% ( $CV > 30\%$ ), the estimate is too unreliable to be published and therefore suppressed for use by letter N.

For more, see the general methodological explanations [Precision of statistical estimates](#).

## 7.5 OTHER EXPLANATIONS

### KEY CHANGES IMPLEMENTED IN THE LABOUR FORCE SURVEY (LFS) IN 2021

	LFS 2021	LFS until 2020
<b>Target population</b>	Residents of Slovenia residing in private households	Residents of Slovenia
<b>Reference week</b>	A specific week in the quarter	Week before the interview
<b>Weighting</b>	Weighting to the total population residing in private households	Weighting to the total population
<b>Definitions</b>		
Employed persons	Employed persons are persons aged 15–89 who during the reference week did any work for pay or profit (in cash or kind) or family gain for at least one hour, including contributing family workers. Persons who were not working but had a job from which they were temporarily absent are also considered employed. Absences include holidays, annual, sick, parental and maternity leave, education or training connected to the job. Seasonal workers absent due to off-season time but performing any kind of work linked to their seasonal work are also listed among employed persons. The same goes for those absent due to	Employed persons are those who during the last week (from Monday to Sunday) prior to the interview did any work for payment (in cash or kind) or family gain. Persons who were not working but had a job from which they were temporarily absent are also included. The same applies to workers on layoffs, persons on maternity leave and unpaid family workers.

	other reasons or lay-off if the total duration of absence is 3 months or less.	
household	Also economically dependent tertiary students, not living in the household are included in the primary household	Tertiary students not included in the household if they do not live in the household.

## METHODOLOGICAL DIFFERENCES BETWEEN REGISTER DATA AND DATA OBTAINED BY STATISTICAL SURVEYS OF PERSONS IN EMPLOYMENT

Register data and data obtained by statistical surveys differ regarding:

- **Source:** register data are based on Statistical Register of Employment while survey data are obtained by the Labour Force Survey. In register data we have full coverage while Labour Force Survey results are estimates based on the statistical sample.
- **Reporting period:** register data are extracted on the last day of the month while survey data refer to the activity of the respondent in the week before the interview (from Monday to Sunday).
- **Observation period:** register data are extracted on the last day of the month while the Labour Force Survey is carried out quarterly.
- **Categories included in persons in paid employment:** register data cover only persons in paid employment with employment contracts while the Labour Force Survey also covers unpaid family workers and persons working under contracts for work or for direct payment, i.e. persons who in the week (from Monday to Sunday) before the interview performed any work for payment (in money or in kind), profit or family gain.
- **Publication:** register and survey data are published in two separate issues of Rapid Reports. Register data are published monthly in Rapid Reports: Labour Force while survey data are published quarterly in Rapid Reports: Labour Force Survey results.

## METHODOLOGICAL DIFFERENCES BETWEEN REGISTER DATA AND DATA OBTAINED BY STATISTICAL SURVEYS OF UNEMPLOYED PERSONS

Register data and data obtained by statistical surveys differ regarding:

- **Source:** register data are provided by the Register of Unemployed Persons, which is kept by the Employment Service of Slovenia, while survey data are obtained by Statistical Office of Republic of Slovenia with the Labour Force Survey. The register data are fully covered while Labour Force Survey results are estimates based on the statistical sample.
- **Reporting period:** register data are extracted on the last day of the month while survey data refer to the activity of the respondent in the week before the interview (from Monday to Sunday).
- **Observation period:** register data are extracted on the last day of the month while the Labour Force Survey is carried out quarterly.

- **Definitions of unemployed persons:** registered unemployed persons are persons who are registered by the employment office and fulfil all criteria defined by the employment office. According to the Labour Force Survey unemployed persons are persons who in the week (from Monday to Sunday) before the interview did not perform any work for payment (in money or in kind), profit or family gain but have been actively seeking work in the last four weeks before the interview and are prepared to accept it in two weeks. Unemployed persons are also those who found work and will start working shortly after the interview.

### **Experimental statistics: monthly number of unemployed and monthly unemployment rate**

Quarterly data on the number of employed and unemployed persons from the LFS are divided by sex and age groups (15-24 and 25-74 years). We get eight time series, starting with the first quarter of 2010. We interpolate and extrapolate each of these time series to get monthly estimates. We use the Denton method and the TRAMO/SEATS method in the JDemetra + program (version 2.2.3). In the Denton method, we use monthly data on registered unemployed persons and monthly data on persons in employment from the statistical survey Persons in Employment (DAK) as indicator series, and we use quarterly LFS data as a benchmark (constraint) to ensure comparability (average monthly estimates are equal to quarterly data). With the TRAMO/SEATS method for seasonal adjustment of time series, we can also obtain forecasts of time series.

Example: For monthly estimates for February 2021, we use LFS data up to the fourth quarter of 2020 (i.e. the quarter before the quarter to which February 2021 belongs to), DAK data up to January 2021 (i.e. the month before February 2021) and monthly data from the register of unemployed persons for the situation on 28 February 2021.

From the eight estimated monthly time series, we calculate data for men, women, and their total, from which we then calculate unemployment rates. Original data, seasonally adjusted data and a trend-cycle component are available.

Monthly estimates are experimental statistics. They are calculated with a model, so they are less reliable and should be used carefully and with caution.

### **Volunteer work**

We collected data on volunteer work in the 3rd quarter of 2019 as part of the Labour Force Survey data collection. We created a special set of questions about performing volunteer work within organizations (formal) and outside of them (participation in informal voluntary activities). The questions were applicable for all persons aged 15 and over, and the questions referred to the period of 4 weeks before the survey and the period of 12 months before the survey.

Volunteer work within organizations is organised unpaid work in fire brigades, humanitarian, disability, youth or environmental organisations, local communities, sports or cultural associations, etc.

Volunteer work outside organizations is informal unpaid work that includes several voluntary activities e.g. helping friends, neighbours, relatives (outside their own household) with construction and repairs, work in the garden, childcare, shopping, transportation.

The questionnaire was created using the [Manual on the Measurement of Volunteer Work](#), published by the International Labor Organization (ILO).

## 8 PUBLISHING

- SiStat Database: Labour Market - Employees, self-employed and unemployed - [Active population by Labour Force Survey - quarterly data](#). Absolute data and shares are published. Data are broken down by age groups, sex, major groups of occupations (SKP), activities (SKD) at 1-digit level and by regions at NUTS-2 level (cohesion region).
- SiStat Database: Labour Market - Employees, self-employed and unemployed - [Active population by Labour Force Survey - annually data](#). Absolute data and shares are published. Data are broken down by age groups, sex, major groups of occupations (SKP), activities (SKD) at 1-digit level and by regions at NUTS-3 level (statistical region).
- SiStat Database: Labour Market - Employees, self-employed and unemployed - [Active population by Labour Force Survey - annually data](#). Absolute data and shares are published on experimental statistics Monthly ILO unemployment rate by age groups and sex.
- First release (Labour Force, Employees, Self-Employed and Unemployed): »Labour Force Survey Results, Slovenia, quarterly«.
- First release (Labour Force, Employees, Self-Employed and Unemployed): »Labour Force Survey Results, Slovenia, annually«.
- Electronic release (Labour Force, Employees, Self-Employed and Unemployed): »Labour Force Survey Results, detailed data, Slovenia, annually«.
- Experimental statistics (Labour Force, Employees, Self-Employed and Unemployed): »Experimental statistics: Monthly unemployment rate, Slovenia, monthly«.
- EUROSTAT (Statistical Office of the European Union)
- The Organisation for Economic Co-operation and Development (OECD)

## 9 REVISION OF THE DATA

### 9.1 PUBLISHING OF PRELIMINARY AND FINAL DATA

Provisional data are not disseminated. Only final data are published.

**Experimental statistics: monthly unemployment rates:** Estimates of the original data obtained with the model are revised (some of the recent data). The

revision itself is not the result of the revision of the input data, but is the result of the benchmarking method. Each time the original data is changed (even if data for a new month is added), the results of seasonal adjustment change throughout the whole seasonally adjusted time series.

## 9.2 FACTORS INFLUENCING COMPARABILITY OVER TIME

The Labour Force Survey was an annual survey from 1993 to 1996 and was carried out in May. From April 1997 it is a continuous survey.

From 2015 the regional data on NUTS-2 and NUTS-3 levels are published according to NUTS Regulation 1319/2013.

The Labour Force Survey has been renovated in 2021 (in the light of the new IESS Framework regulation), so we can expect a minor break in the time series. Methodological explanation on revision of statistical data is available on

[https://www.stat.si/statweb/File/DocSysFile/5299/REVISION\\_2019\\_methodological\\_note.pdf](https://www.stat.si/statweb/File/DocSysFile/5299/REVISION_2019_methodological_note.pdf)

## 10 OTHER METHODOLOGICAL MATERIALS

Methodological materials on SURSs website are available at <https://www.stat.si/statweb/en/Methods/QuestionnairesMethodologicalExplanationsQualityReports>.

Questionnaire (only in Slovene);

- Aktivno in neaktivno prebivalstvo (ANP), (only in Slovene)

theme: Labour Force, sub-theme: Employees, Self-Employed and Unemployed.

<https://www.stat.si/StatWeb/en/Methods/QuestionnairesMethodologicalExplanationsQualityReports>