

**QUALITY REPORT FOR STATISTICAL SURVEY**  
**Labour Force Survey (LFS)**  
**for 2023**

Organisational unit: Living Conditions and Economic Activity of Population Statistics Department

Prepared by: Anita Pavlović

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## 0. Basic information

- Purpose, goal, and subject of the survey

The Labour Force Survey measures the economic activity of population in a short survey period of one week. The survey collects demographic and educational characteristics of household members by sex, characteristics of the main and secondary jobs as well as of past jobs a person did, employment status, hours of work, working time, activity, occupation, characteristics of unemployed and inactive persons.

- Reference period

Data are collected and published for each quarter in a year.

- Legal acts and other agreements

The Labour Force Survey is carried out in line with the following national legal acts:

- Official Statistics Act (NN, No 25/20)
- Programme of Statistical Activities of the Republic of Croatia 2021 – 2027 (NN, No 29/22)
- Annual Implementation Plan of Statistical Activities of the Republic of Croatia.

The Labour Force Survey is carried out in line with the following regulations:

### Regulation

- 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, amending Regulations (EC) No 808/2004, (EC) No 452/2008 and (EC) No 1338/2008 of the European Parliament and of the Council, and repealing Regulation (EC) No 1177/2003 of the European Parliament and of the Council and Council Regulation (EC) No 577/98

### Implementing Regulations

- Commission Implementing Regulation (EU) 2019/2240 of 16 December 2019 specifying the technical items of data sets, establishing the technical formats and specifying the detailed arrangements and content of the quality reports on the organisation of a sample survey in the income and living conditions domain pursuant to Regulation (EU) 2019/1700 of the European Parliament and of the Council
- Commission Delegated Regulation (EU) 2020/256 of 16 December 2019 supplementing Regulation (EU) 2019/1700 of the European Parliament and of the Council by establishing a multiannual rolling planning
- Commission Delegated Regulation (EU) 2020/257 of 16 December 2019 supplementing Regulation (EU) 2019/1700 of the European Parliament and of the Council by specifying the number and the titles of the variables for the labour force domain
- Commission Implementing Regulation (EU) 2019/2180 of 16 December 2019 specifying the detailed arrangements and content for the quality reports pursuant to Regulation (EU) 2019/1700 of the European Parliament and of the Council
- Commission Implementing Regulation (EU) 2019/2181 of 16 December 2019 specifying technical characteristics as regards items common to several datasets pursuant to Regulation (EU) 2019/1700 of the European Parliament and of the Council
- Commission Implementing Regulation (EU) 2019/2241 of 16 December 2019 describing the variables and the length, quality requirements and level of detail of the time series for the transmission of monthly unemployment data pursuant to Regulation (EU) 2019/1700 of the European Parliament and of the Council

## Regulations on the use of classifications in the EU-LFS

- Commission Regulation (EU) No. 317/2013 of 8 April 2013 amending Regulation (EC) No. 1983/2003, Regulation (EC) No. 1738/2005, Regulation (EC) No. 698/2006, Regulation (EC) No. 377/2008 and Regulation (EU) No. 823/2010 concerning the international standard classification of education. This Regulation prescribes the use of ISCED 2011 in the Labour Force Survey from 2014 onwards.
- Commission Regulation (EC) No. 1022/2009 of 29 October 2009 amending Regulation (EC) No. 1738/2005, Regulation (EC) No. 698/2006 and Regulation (EC) No. 377/2008 concerning the International Standard Classification of Occupations (ISCO). This Regulation prescribes the use of ISCO-08 in the Labour Force Survey from 2011 onwards.
- Commission Regulation (EC) No. 973/2007 of 20 August 2007 amending certain EC Regulations on specific statistical domains implementing the statistical classification of economic activities NACE Revision 2, Article 9 prescribes the use of NACE Revision 2 in the Labour Force Survey from 2008 onwards.

- Classification system

National Classification of Activities, 2007 version – NKD 2007

International Standard Classification of Education

Code List of Countries

International Standard Classification of Occupations

Citizenship

Degree of Urbanisation

National Classification of Activities, 2010 version

National Classification of Spatial Units for Statistics 2021 – 2nd level statistical regions

- Statistical concepts and definitions

The most important variables observed in the Labour Force Survey are the following: household, working-age population, persons in employment, employees, self-employed persons, unpaid family workers, unemployed persons, labour force, inactive population, activity rate, employment rate and unemployment rate.

A household is a small economic group of persons that is usually, although not always, a group of relatives living together and sharing all or major part of the costs of living (housing, food, etc.).

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

Persons in employment are persons aged 15 to 89 who did any work for payment in cash or in kind during the reference week. They include all employees, self-employed persons and family members helping in a business entity owned by a member of their family or in some other kind of a gainful activity, as well as persons who worked on contract basis of any kind for direct payment in cash or in kind. Therefore, the Survey covers all persons who worked at least one hour in the reference period no matter what their formal status or payment arrangements. Therefore, a retired person, a student or a housewife can also be classified as a person in employment in the Labour Force Survey.

Employed persons also include all employees or the self-employed who were temporarily absent from work in the reference week, but intend to return to work for the same employer or in the same activity after the reasons for absence cease to exist.

Persons in paid employment (employees) are those who work for an employer in the government or private sector and are paid for their work in cash or in kind.

Self-employed are employers who run an enterprise and employ one or more employees, as well as own-account workers who have no employees.

Unpaid family workers are those who are not in paid employment or self-employed, but work in an enterprise owned by a family member and do not receive any payment for their work. These can be relatives who do not live in the same household as the owner of the family business.

Unemployed persons are persons aged 15 to 74 who meet the following three criteria:

- a) in the reference week did no work for payment in cash or in kind
- b) were actively seeking job four weeks prior to the Survey
- c) were currently available to start work within the next two weeks.

Those who have found a job starting in the future are also included.

Currently active population or the labour force refers to employed and unemployed persons classified by economic activity in the reference week.

Inactive persons are those below the age of 15 as well as those of working age who are not in paid employment or unemployed.

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

Employment rate represents persons in employment as a percentage of working-age population.

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

- **Statistical units**

Private households, working-age population – persons aged 15 and over.

- **Statistical population**

The target population covered by the Survey is determined by the presence of interviewed household members in the household. The definition of presence is based on the "de facto principle", which excludes household members living at some other address where they work or go to school for more than 12 months, as well as temporarily present members of another household. The Survey does not cover collective households such as student homes, convents, etc.

## **1. Relevance**

### **1.1. Data users**

Internal users – National Accounts Department

National users – Government of the Republic of Croatia; ministries; Institute of Economics; faculties; media; scientists; labour market analysts

International users – UN, ILO, IMF, World Bank

#### **1.1.1. User needs**

The standard prescribed by Eurostat meets the needs of national and international users.

Scientific and research institutes use survey results for national and international scientific and research projects and works in order to develop recommendations to relevant institutions aimed at improving the status of the labour force, especially of unemployed persons on the territory of the Republic of Croatia. The Croatian Employment Service uses survey results to determine the necessary improvements in their field of work, for example, in the area of labour market. Eurostat uses the survey data for a systematic and user-oriented presentation of internationally comparable indicators of the Labour Force Survey (for all EU Member States).

### 1.1.2. User satisfaction

The first user satisfaction survey of the Croatian Bureau of Statistics was conducted in 2013, the second one in 2015, and the last one at the end of 2022. The results of the survey are available on the website of the Croatian Bureau of Statistics – [User satisfaction surveys](#).

## 1.2. Completeness

The survey covers all variables prescribed by Eurostat's regulations and guidelines. Data are collected and published in line with Eurostat regulation.

### 1.2.1. Data completeness rate

100%.

## 2. Accuracy and reliability

### 2.1. Sampling error

It refers to a random sample selection as well as to precision measures of the most important indicators of the economic activity of population, such as standard estimation error, variation coefficient and confidence interval.

#### 2.1.1. Sampling error indicators

Estimations and precision measures of the most important indicators of economic activity of the population, first quarter of 2023.

	Estimation	Standard estimation error	Confidence interval (95%)	Coefficient of variation
Activity rate	52.1	0.8	[50.61; 53.65]	1.5
Employment rate	48.3	0.8	[46.74; 49.88]	1.6
Unemployment rate	7.3	0.6	[6.12; 8.53]	8.4

%

Estimations and precision measures of the most important indicators of economic activity of the population, second quarter of 2023.

	Estimation	Standard estimation error	Confidence interval (95%)	Coefficient of variation
Activity rate	52.2	0.7	[50.74; 53.63]	1.4
Employment rate	49.3	0.7	[47.83; 50.71]	1.5
Unemployment rate	5.6	0.5	[4.67; 6.51]	8.4

%

Estimations and precision measures of the most important indicators of economic activity of the population, third quarter of 2023.

	Estimation	Standard estimation error	Confidence interval (95%)	Coefficient of variation
Activity rate	52.0	0.7	[50.60; 53.35]	1.4
Employment rate	49.1	0.7	[47.73; 50.50]	1.4
Unemployment rate	5.5	0.4	[4.63; 6.37]	8.0

%

Estimations and precision measures of the most important indicators of economic activity of the population, fourth quarter of 2023.

%

	Estimation	Standard estimation error	Confidence interval (95%)	Coefficient of variation
Activity rate	52.8	0.7	[51.43; 54.09]	1.3
Employment rate	49.6	0.7	[48.28; 50.99]	1.4
Unemployment rate	5.9	0.4	[5.11; 6.74]	7.0

## 2.2. Non-sampling error

Non-sampling errors are all other errors that are not connected with the sample selection – coverage, measurement, processing, non-response.

### 2.2.1. Coverage error

From the second quarter of 2023 onwards, a new sample frame was determined and the sample for the new panels was selected from the Census of Population, Households and Dwellings in the Republic of Croatia 2021, while the repeated panels are from the 2011 Census. Deviations from the sample selection frame lead to coverage errors, that is, over-coverage and under-coverage errors.

### 2.2.2. Over-coverage rate

Over-coverage rate

%

Domain	Domain value	Comment	Q1	Q2	Q3	Q4	Average
Croatia	Croatia		10.02	9.1	8.32	7.06	8.63
County	Zagreb		6.29	5.11	4.83	3.6	4.96
County	Krapina-Zagorje		6.26	2.92	1.34	4.71	3.81
County	Sisak-Moslavina		11.36	9.38	6.58	7.46	8.7
County	Karlovac		2.27	1.09	0.72	3.03	1.78
County	Varaždin		6.87	5.97	4.13	4.95	5.48
County	Koprivnica-Križevci		4.92	7.5	7.43	5.92	6.44
County	Bjelovar-Bilogora		10.74	10.52	10.9	11.15	10.83
County	Primorje-Gorski kotar		14.23	13.89	14.14	10.1	13.09
County	Lika-Senj		6.06	6.06	4.13	4.13	5.1
County	Virovitica-Podravina		17.04	10.16	5.68	9.09	10.49
County	Požega-Slavonia		20.12	9.09	5.19	9.79	11.05
County	Slavonski Brod-Posavina		9.74	7.74	7.74	6.58	7.95
County	Zadar		7.57	7.62	6.96	7.33	7.37
County	Osijek-Baranja		9.4	11.0	9.25	6.77	9.11
County	Šibenik-Knin		16.74	13.18	6.36	5.9	10.55
County	Vukovar-Srijem		16.04	9.09	8.23	11.93	11.32
County	Split-Dalmatia		12.7	12.72	13.32	10.1	12.21
County	Istria		11.86	10.52	11.0	7.17	10.14
County	Dubrovnik-Neretva		7.35	8.65	8.26	5.37	7.41
County	Međimurje		4.36	4.54	3.78	1.65	3.58
County	City of Zagreb		10.09	10.5	10.08	7.03	9.43

### 2.2.3. Measurement error

Errors made by interviewers (e.g., at data entry) are possible, but they have been minimised by providing regular trainings, pilot tests, etc. In addition, data verification is integrated into the Blaise entry programme (checks of minimal and maximum values, logical correlation between particular questions etc.). During data processing, a detailed data verification of all answers is done, e.g. verification of entered values by ranges, checks of possible answers, logical and computational checks of activities and occupations, logical checks of data on economic activity, status in employment, educational attainment etc.

#### 2.2.4. Non-response errors

The non-response errors show how many statistical units did not answer to the questions in the questionnaire. In 2023, the non-response rate amounted to 42.9%.

#### 2.2.5. Unit non-response rate

Unweighted non-response rate:

%

Domain	Domain value	Comment	Q1	Q2	Q3	Q4	Average
Croatia	Croatia		41.47	43.36	43.7	43.09	42.91
County	Zagreb		48.5	47.15	48.99	53.14	49.45
County	Krapina-Zagorje		26.75	28.76	30.37	26.14	28.01
County	Sisak-Moslavina		48.71	46.92	38.59	42.8	44.26
County	Karlovac		30.62	28.67	28.93	31.25	29.87
County	Varaždin		17.41	17.95	20.4	19.13	18.72
County	Koprivnica-Križevci		38.64	33.5	37.19	43.27	38.15
County	Bjelovar-Bilogora		18.51	24.06	23.46	18.6	21.16
County	Primorje-Gorski kotar		53.6	59.16	57.64	56.74	56.79
County	Lika-Senj		4.3	4.3	1.72	0.86	2.8
County	Virovitica-Podravina		25.34	31.54	24.69	16.66	24.56
County	Požega-Slavonia		35.77	43.57	41.78	37.2	39.58
County	Slavonski Brod-Posavina		33.81	34.42	35.99	38.81	35.76
County	Zadar		30.49	29.84	25.08	31.64	29.26
County	Osijek-Baranja		46.53	48.56	54.28	49.46	49.71
County	Šibenik-Knin		66.66	57.59	59.7	63.76	61.93
County	Vukovar-Srijem		21.97	27.87	24.45	23.22	24.38
County	Split-Dalmatia		40.12	42.55	46.26	45.64	43.64
County	Istria		33.81	37.7	42.47	33.5	36.87
County	Dubrovnik-Neretva		71.49	74.88	72.97	68.99	72.08
County	Međimurje		47.14	53.96	50.39	44.53	49.01
County	City of Zagreb		52.93	55.69	54.91	53.71	54.31

#### 2.2.6. Item non-response rate

The indicator for this survey is not applicable.

#### 2.2.7. Processing errors

During data processing, a detailed data verification of all answers is done, e.g., checks of possible answers, logical and computational checks of the status in employment, logical checks of data on the status in economic activity and codes of activities and occupations, logical checks of data on educational attainment, working time, hours of work etc.

#### 2.2.8. Imputation rate

The indicator for this survey is not applicable.

#### 2.2.9. Model assumption error

The indicator for this survey is not applicable.

### 2.3. Data revision

#### 2.3.1. Data revision – policy

The users of statistical data are informed about revisions on the website of the Croatian Bureau of Statistics.

#### 2.3.2. Data revision – practice

Provisional data are not published in the survey; therefore, there are no data revisions. After the completion of the Census of Population, Households and Dwellings in the Republic of Croatia in 2021 and after the results of the revised population estimates become available, a revision of the Labour Force Survey data will be carried out.

#### 2.3.3. Data revision – average size

The indicator for this survey is not applicable.

### 2.4. Seasonal adjustment

The indicator for this survey is not applicable.

## 3. Timeliness and punctuality

### 3.1. Timeliness

Final data are published in June for the first quarter, in September for the second quarter, in December for the third quarter of the current year, and in March for the fourth quarter of the previous year, according to the Calendar of Statistical Data Issues.

#### 3.1.1. Timeliness – first results

The indicator for this survey is not applicable.

#### 3.1.2. Timeliness – final results

Domain	Domain value	Comment	Q1	Q2	Q3	Q4
Croatia	Croatia		T + 7 weeks	T + 7 weeks	T + 7 weeks	T + 7 weeks

### 3.2. Punctuality

All planned publications are published in a timely manner as specified in the Calendar of Statistical Data Issues.

#### 3.2.1. Punctuality – delivery and publication

Delivery and publication is 1.



## 4. Accessibility and clarity

Data are available on the website of the Croatian Bureau of Statistics and in printed form. In addition, data are also available in the Safe Room and on CD (on user request).

### 4.1. News releases

First Release RAD-2023-3-1 "Labour Force in the Republic of Croatia"

### 4.2. Online database

The indicator for this survey is not applicable.

### 4.3. Micro-data access

The conditions under which certain users can access microdata are regulated by [the Ordinance on conditions and terms of access and use of confidential statistical data of the Croatian Bureau of Statistics for scientific purposes](#). Microdata are available on user request with the consent of the Statistical Confidentiality Committee and the Director General of the Croatian Bureau of Statistics, on CD, in the Safe Room since 2015 and via remote access since 2016.

### 4.4. Documentation on methodology

The notes on methodology for the Labour Force Survey are available on the website of the Croatian Bureau of Statistics in the Statistics section – Publications. In addition, methodological guidelines and the questionnaire for the Labour Force Survey are available on the Eurostat website.

## 5. Coherence and comparability

### 5.1. Asymmetry for mirror flows statistics

The indicator for this survey is not applicable.

### 5.2. Comparability over time

The Census of Population, Households and Dwellings 2001 was used as a sample frame for the implementation of the Labour Force Survey and the estimation of all categories of the population from 2007 to 2014. Since 2014, the Census of Population, Households and Dwellings 2011 has been used as a sample frame. Data from 2007 to 2014 were completely comparable. Due to the change of the sample frame in 2014, there was a kind of interruption in the series, but in 2014, the data for the period from 2007 to 2014 were calibrated (based on the Census of Population, Households and Dwellings 2011). Therefore, the calibrated data for those previous years and onwards until the first quarter of 2023 are comparable and coherent. However, the data from the first quarter of 2023 onwards were estimated on the basis of the results of the Census of Population, Households and Dwellings in the Republic of Croatia in 2021 (2021 Census), while the previously published data were estimated based on the 2011 Census. As a result, there was a break in the time series of data, and the data for the first quarter of 2023 and onwards are not comparable with the data for the previous quarters. In order to achieve consistency and enable comparability of the data for the first quarter of 2023 and onwards with already published data for previous years, a data revision will be carried out subsequently, thus making the data for previous years coherent with the results of the 2021 Census using the calibration method.

#### 5.2.1. Length of comparable time series

Length of comparable time series:

Domain	Domain value	Comment	Q1	Q2.	Q3	Q4
Croatia	Croatia		64	64	64	64

Time series from 2007 to 2022 are comparable. In the first quarter of 2023, there was a break in time series because the data estimate was carried out based on the results of the 2021 Census. In order to enable the comparability of data for the first quarter of 2023 and onwards with already published data for previous years, a data revision will be carried out subsequently.

#### 5.2.2. Reasons for break in time series

Data estimate for the first quarter of 2023 and onwards based on the results of the Census of Population, Households and Dwellings 2021.

### 5.3. Coherence – sub-annual and annual statistics

The indicator for this survey is not applicable.

### 5.4. Coherence – national accounts

Coherence – national accounts

Statistics	Domain	Domain value	Comment	Q1	Q2	Q3	Q4	Average
Persons in employment, total	Croatia	Croatia	National Accounts take over the total number of persons in employment from the Labour Force Survey.	1	1	1	1	1

### 5.5. Coherence – administrative sources

Coherence – administrative sources:

Statistics	Domain	Domain value	Comment	Q1	Q2	Q3	Q4	Average
Total population	Croatia	Croatia	Data are completely harmonised with data from the Population Statistics Department.	1	1	1	1	1
Persons in employment, total	Croatia	Croatia	Data are annual, for 2023. Comparison with administrative sources	0.036	0.036	0.036	0.036	0.036
Unemployed	Croatia	Croatia	Data are annual, for 2023. Comparison with administrative sources	0.046	0.046	0.046	0.046	0.046
Active population	Croatia	Croatia	Data are annual, for 2023. Comparison with administrative sources	0.037	0.037	0.037	0.037	0.037

## 6. Cost and burden

### 6.1. Cost

The total costs that include compensations for contractual agreements for external interviewers who participated in the collection of data in 2023 amounted to 382 392 euro. That amount does not include the costs of interviewers who are the employees of the Croatian Bureau of Statistics, the costs of supervisors and the costs of the preparation and processing of data.

## **6.2. Burden**

The interviewing took 15 minutes on average per household. In 2023, about 268 635 minutes were spent on interviewing households who gave their consent to be interviewed for the survey, which amounts to approximately seven minutes per person.