

**QUALITY REPORT FOR STATISTICAL SURVEY**  
**Labour Force Survey (LFS)**  
**For 2019**

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

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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, Nos 103/03, 75/09, 59/12 and 12/13 – consolidated text)
- Programme of Statistical Activities of the Republic of Croatia 2018 – 2020 (NN, No 31/18)
- Annual Implementation Plan of Statistical Activities of the Republic of Croatia.

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

### General Regulations

- Council Regulation (EC) No. 577/98 of 9 March 1998 on the organisation of a labour force sample survey in the Community
- Regulation (EU) No. 545/2014 of the European Parliament and of the Council of 15 May 2014 amending Council Regulation (EC) No. 577/98 on the organisation of a labour force sample survey in the Community
- Regulation (EC) No. 596/2009 of the European Parliament and of the Council of 18 June 2009 amending Council Regulation (EC) No. 577/98
- Regulation (EC) No. 1372/2007 of the European Parliament and of the Council of 23 October 2007 amending Council Regulation (EC) No. 577/98
- Regulation (EC) No. 2257/2003 of the European Parliament and of the Council of 25 November 2003 amending Council Regulation (EC) No. 577/98
- Regulation (EC) No. 1991/2002 of the European Parliament and of the Council of 8 October 2002 amending Council Regulation (EC) No. 577/98

### Implementing Regulations

- Commission Regulation (EC) No. 377/2008 of 25 April 2008 implementing Council Regulation (EC) No. 577/98 on the organisation of a labour force sample survey in the Community as regards the codification to be used for data transmission from 2009 onwards, the use of a sub-sample for the collection of data on structural variables and the definition of the reference quarters
- Commission Regulation (EC) No. 430/2005 of 15 March 2005 implementing Council Regulation (EC) No. 577/98 on the organisation of a labour force sample survey in the Community concerning the codification to be used for data transmission from 2006 onwards and the use of a sub-sample for the collection of data on structural variables
- Commission Regulation (EC) No. 1897/2000 of 7 September 2000 implementing Council Regulation (EC) No. 577/98 on the organisation of a labour force sample survey in the Community concerning the operational definition of unemployment

- Commission Regulation (EC) No. 1575/2000 of 19 July 2000 implementing Council Regulation (EC) No. 577/98 on the organisation of a labour force sample survey in the Community concerning the codification to be used for data transmission from 2001 onwards Amendment to the Commission Regulation (EC) No. 1575/2000
- Commission Regulation (EC) No. 1571/98 of 20 July 1998 implementing Council Regulation (EC) No. 577/98. Annex I of the Regulation defines the reference quarters to be applied in the case of a continuous survey, while Annex IV defines the codification to be used for data transmission from 1998 to 2000.

#### 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 2012

- 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 costs of living (housing, food, etc.).

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

Persons in employment are those who did any work for payment in cash or 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. 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.

Employees are those who work for an employer in the government or private sector and are paid for their work in cash or 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.

Unemployed persons are those who meet the following criteria:

- a) in the reference period did not work for payment in cash or in kind
- b) were actively seeking work during four weeks prior to the Survey
- c) were currently available for work within the next two weeks.

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

Currently active population or the labour force refers to persons in paid employment or 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, and working-age population –persons aged 15 years 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 was carried out in 2013, and the second one in 2015. The survey results can be found on the website of the Croatian Bureau of Statistics.

### **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 2019.

%

|                   | Estimation | Standard estimation error | Confidence interval (95%) | Coefficient of variation |
|-------------------|------------|---------------------------|---------------------------|--------------------------|
| Activity rate     | 51.0       | 0.7                       | [49.6; 52.4]              | 1.4                      |
| Employment rate   | 47.2       | 0.8                       | [45.7; 48.6]              | 1.6                      |
| Unemployment rate | 7.6        | 0.5                       | [6.6; 8.5]                | 6.6                      |

Estimations and precision measures of the most important indicators of economic activity of the population, second quarter of 2019.

%

|                   | Estimation | Standard estimation error | Confidence interval (95%) | Coefficient of variation |
|-------------------|------------|---------------------------|---------------------------|--------------------------|
| Activity rate     | 50.7       | 0.7                       | [49.3; 52.2]              | 1.4                      |
| Employment rate   | 47.7       | 0.7                       | [46.2; 49.1]              | 1.6                      |
| Unemployment rate | 6.1        | 0.5                       | [5.1; 7.0]                | 8.1                      |

Estimations and precision measures of the most important indicators of economic activity of the population, third quarter of 2019.

%

|                   | Estimation | Standard estimation error | Confidence interval (95%) | Coefficient of variation |
|-------------------|------------|---------------------------|---------------------------|--------------------------|
| Activity rate     | 51.4       | 0.7                       | [50.0; 52.7]              | 1.4                      |
| Employment rate   | 48.4       | 0.7                       | [47.0; 49.8]              | 1.5                      |
| Unemployment rate | 5.7        | 0.5                       | [4.7; 6.7]                | 8.6                      |

Estimations and precision measures of the most important indicators of economic activity of the population, fourth quarter of 2019.

%

|                   | Estimation | Standard estimation error | Confidence interval (95%) | Coefficient of variation |
|-------------------|------------|---------------------------|---------------------------|--------------------------|
| Activity rate     | 51.3       | 0.7                       | [49.9; 52.8]              | 1.4                      |
| Employment rate   | 47.7       | 0.8                       | [46.2; 49.1]              | 1.6                      |
| Unemployment rate | 7.2        | 0.6                       | [6.1; 8.3]                | 7.8                      |

## 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

Data from the Census of Population, Households and Dwellings in 2011 were used as a sample frame. Deviation from the sample selection frame causes coverage errors to occur, namely the over-coverage error and the under-coverage error.

### 2.2.2. Over-coverage rate

#### Over-coverage rate

|         |                         |         |       |       |       |       | %       |
|---------|-------------------------|---------|-------|-------|-------|-------|---------|
| Domain  | Domain value            | Comment | Q1    | Q2    | Q3    | Q4    | Average |
| Croatia | Croatia                 |         | 13.46 | 12.08 | 11.94 | 13.56 | 12.76   |
| County  | Zagreb                  |         | 6.59  | 4.89  | 3.1   | 3.34  | 4.48    |
| County  | Krapina-Zagorje         |         | 15    | 19    | 12    | 10.96 | 14.24   |
| County  | Sisak-Moslavina         |         | 11.92 | 11.86 | 14.08 | 14.62 | 13.12   |
| County  | Karlovac                |         | 16.84 | 13.69 | 12.5  | 13.81 | 14.21   |
| County  | Varaždin                |         | 10    | 8.8   | 11.25 | 12.09 | 10.54   |
| County  | Koprivnica-Križevci     |         | 18.23 | 15.3  | 13.53 | 12.5  | 14.89   |
| County  | Bjelovar-Bilogora       |         | 14.7  | 10.59 | 10    | 11.67 | 11.74   |
| County  | Primorje-Gorski kotar   |         | 20.14 | 17.61 | 17.15 | 20.15 | 18.76   |
| County  | Lika-Senj               |         | 10.76 | 10    | 5     | 5.84  | 7.9     |
| County  | Virovitica-Podravina    |         | 16.15 | 17.15 | 18    | 20    | 17.83   |
| County  | Požega-Slavonia         |         | 14.54 | 10    | 12.73 | 17.28 | 13.64   |
| County  | Slavonski Brod-Posavina |         | 18.88 | 17.31 | 15.6  | 14.8  | 16.65   |
| County  | Zadar                   |         | 17.29 | 12.98 | 10.79 | 14.62 | 13.92   |
| County  | Osijek-Baranja          |         | 17.33 | 15.22 | 17.18 | 17.83 | 16.89   |
| County  | Šibenik-Knin            |         | 21.11 | 15.56 | 12.8  | 20    | 17.37   |
| County  | Vukovar-Srijem          |         | 13.1  | 17.59 | 20.69 | 22.42 | 18.45   |
| County  | Split-Dalmatia          |         | 16.66 | 12.7  | 14.9  | 16.85 | 15.28   |
| County  | Istria                  |         | 8.93  | 8.13  | 7.45  | 11.53 | 9.01    |
| County  | Dubrovnik-Neretva       |         | 4     | 4.59  | 2.09  | 1.16  | 2.96    |
| County  | Međimurje               |         | 8.88  | 8.24  | 8.24  | 6.67  | 8.01    |
| County  | City of Zagreb          |         | 7.4   | 8.35  | 8.46  | 9.91  | 8.53    |

### 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 error

The non-response errors show how many statistical units did not answer to the questions in the questionnaire. In 2019, the unweighted non-response rate amounted to 43.7%.

### 2.2.5. Unit non-response rate

Unweighted non-response rate:

|         |                         |         |       |       |       |       | %       |
|---------|-------------------------|---------|-------|-------|-------|-------|---------|
| Domain  | Domain value            | Comment | Q1    | Q2    | Q3    | Q4    | Average |
| Croatia | Croatia                 |         | 40.49 | 42.92 | 46.07 | 45.21 | 43.67   |
| County  | Zagreb                  |         | 31.63 | 35.21 | 38.58 | 39.66 | 36.27   |
| County  | Krapina-Zagorje         |         | 21.17 | 18.52 | 23.87 | 29.41 | 23.24   |
| County  | Sisak-Moslavina         |         | 39.73 | 37.82 | 46.56 | 43.24 | 41.84   |
| County  | Karlovac                |         | 43.67 | 50    | 53.72 | 48.62 | 49      |
| County  | Varaždin                |         | 21.79 | 25    | 24.42 | 19.91 | 22.78   |
| County  | Koprivnica-Križevci     |         | 18.7  | 18.06 | 28.58 | 35.71 | 25.26   |
| County  | Bjelovar-Bilogora       |         | 17.93 | 15.13 | 21.57 | 25.16 | 19.95   |
| County  | Primorje-Gorski kotar   |         | 52.81 | 49.57 | 51.38 | 53.04 | 51.7    |
| County  | Lika-Senj               |         | 9.48  | 12.04 | 8.78  | 6.19  | 9.12    |
| County  | Virovitica-Podravina    |         | 29.35 | 29.31 | 40.65 | 43.75 | 35.77   |
| County  | Požega-Slavonia         |         | 38.29 | 48.48 | 43.75 | 43.96 | 43.62   |
| County  | Slavonski Brod-Posavina |         | 29.68 | 36.28 | 31.76 | 31.92 | 32.41   |
| County  | Zadar                   |         | 37.58 | 32.3  | 38.35 | 40.24 | 37.12   |
| County  | Osijek-Baranja          |         | 29.3  | 30.51 | 40.42 | 44.97 | 36.3    |
| County  | Šibenik-Knin            |         | 59.62 | 61.4  | 64.68 | 65.5  | 62.8    |
| County  | Vukovar-Srijem          |         | 36.9  | 30.54 | 28.7  | 31.11 | 31.81   |
| County  | Split-Dalmatia          |         | 45.06 | 51.35 | 55.69 | 53.2  | 51.33   |
| County  | Istria                  |         | 36.68 | 39.68 | 49.43 | 47.91 | 43.43   |
| County  | Dubrovnik-Neretva       |         | 61.66 | 71.18 | 76.17 | 66.93 | 68.99   |
| County  | Međimurje               |         | 51.82 | 55.13 | 39.75 | 39.29 | 46.5    |
| County  | City of Zagreb          |         | 51.5  | 57.36 | 57.1  | 52.55 | 54.63   |



## 2.2.6. Item non-response rate

Unweighted non-response rate for certain variables:

| Variable | Domain  | Domain value | Comment | Q1   | Q2   | Q3 | Q4 |
|----------|---------|--------------|---------|------|------|----|----|
| HWOVERP  | Croatia | Croatia      |         | 98.4 | 96.8 | -  | -  |

## 2.2.7. Processing error

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 (provisional, final data) 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.

### 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 July for the first quarter, in October for the second quarter of the current year, in January for the third quarter and in April for the fourth quarter of the previous year, according to the Publishing Programme.

#### 3.1.1. Time lag – first results

Time lag – first results is T + 12 weeks.

#### 3.1.2. Time lag – final results

Time lag – final results is T + 15 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 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 9.2.6. "Labour Force in the Republic of Croatia"

### 4.2. Online databases

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 the Conditions and Manner of Using Confidential Statistical Data for Scientific Purposes. Microdata are available on user requests with the consent of the Statistical Confidence 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 within Released Data on the website of the Croatian Bureau of Statistics. 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 assessment 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 break 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 are still comparable and coherent.

### 5.2.1. Length of comparable time series

Length of comparable time series:

| Domain  | Domain value | Comment | Q1 | Q2 | Q3 | Q4 |
|---------|--------------|---------|----|----|----|----|
| Croatia | Croatia      |         | 49 | 50 | 51 | 52 |

### 5.2.2. Reasons for break in time series

Use of the new sample frame from the Census of Population, Households and Dwellings 2011 since 2014.

## 5.3. Coherence – subannual 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 | Hrvatska | Hrvatska     | 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 with data from administrative sources is as follows.

| 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 2019. Comparison with administrative sources                   | 0.08  | 0.08  | 0.08  | 0.08  | 0.08    |
| Unemployed                   | Croatia | Croatia      | Data are annual, for 2019. Comparison with administrative sources                   | 0.08  | 0.08  | 0.08  | 0.08  | 0.08    |
| Active population            | Croatia | Croatia      | Data are annual, for 2019. Comparison with administrative sources                   | 0.068 | 0.068 | 0.068 | 0.068 | 0.068   |

## 6. Cost and burden

### 6.1. Cost

The total costs that include compensations for contractual agreements for external and CATI interviewers who participated in the collection of data in 2019 amounted to 1 052 000 kuna. That amount does not include the costs of interviewers who work for the Croatian Bureau of Statistics, and neither the costs of controllers, the preparation and processing of data.

### 6.2. Burden

The interviewing of a single household took 15 minutes on average. In 2019, about 214 635 minutes were spent in interviewing households who gave their consent to be interviewed for the survey, which makes approximately 6.8 minutes per person.