

## First Release

Year: LX.

Zagreb, 13 March 2024

RAD-2023-3-1/4

ISSN 1334-0557



# LABOUR FORCE IN THE REPUBLIC OF CROATIA, FOURTH QUARTER OF 2023

The main results of the Labour Force Survey are presented for the quarterly period from October to December 2023.

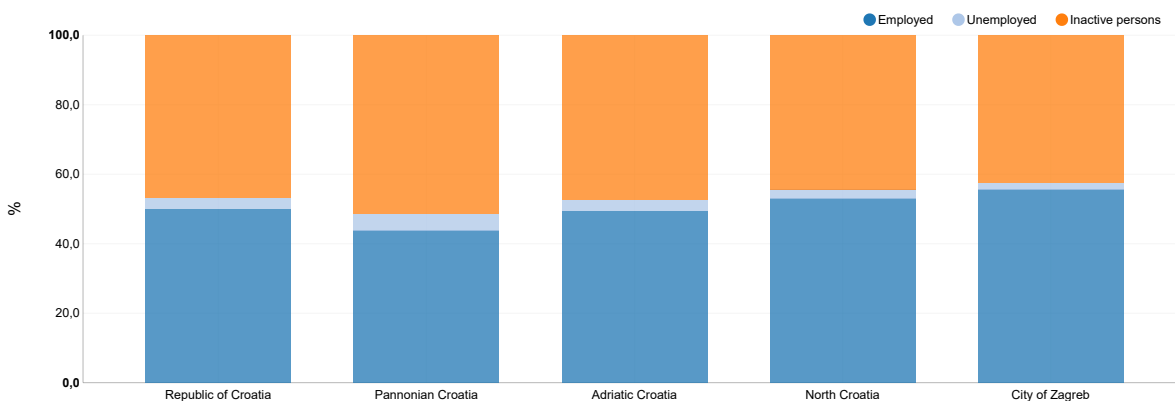
According to the Labour Force Survey, there were 1 616 thousand employed persons and 102 thousand unemployed persons in the Republic of Croatia in the fourth quarter of 2023. In the same reference period, the employment rate for persons aged 15 to 64 was 66.5%, whereas the ILO unemployment rate for the same age group was 6.0%.

The data for the first quarter of 2023 and onwards were estimated on the basis of the results of the 2021 Census of Population, Households and Dwellings in the Republic of Croatia (the 2021 Census), whereas the data published previously were estimated on the basis of the 2011 Census. This has caused a break in time series, therefore the data for the first quarter of 2023 and onwards are not comparable with the data for previous quarters. The data will be subsequently revised in order to ensure consistency and comparability of the data for the first quarter of 2023 and onwards with the already published data for previous years. In this way, the data for previous years will be harmonised with the results of the 2021 Census by using the calibration method.

Having in mind that the Labour Force Survey methodology is harmonised with the methodology prescribed by the Statistical Office of the European Union (Eurostat), the results for the Republic of Croatia are comparable to the results of all EU Member States.

More detailed results of the Labour Force Survey can be downloaded at [Statistics in Line - Active Population](#) as well as on Eurostat's webpage at <https://ec.europa.eu/eurostat/web/main/data/database>.

## G-1 WORKING-AGE POPULATION (15 - 89), BY ACTIVITY AND REGIONS, FOURTH QUARTER OF 2023



# 1 WORKING-AGE POPULATION, BY ACTIVITY AND SEX IN THE REPUBLIC OF CROATIA<sup>1)</sup>

'000

	X – XII 2022	I – III 2023 <sup>2)</sup>	IV – VI 2023	VII – IX 2023	X – XII 2023
<b>Republic of Croatia</b>					
<b>Total</b>					
Working-age population (15+)	3 509	3 275	3 269	3 262	3 256
Labour force (15 – 89)	1 844	1 707	1 706	1 696	1 718
Employed persons (15 – 89)	1 719	1 582	1 611	1 602	1 616
Unemployed persons (15 – 74)	124	125	95	93	102
Inactive population (15+)	1 665	1 568	1 563	1 567	1 538
<b>%</b>					
Activity rate (15 – 89)	53,0	52,5	52,5	52,3	53,1
Activity rate (15 – 64)	70,4	69,8	70,0	69,7	70,8
Employment rate (15 – 89)	49,4	48,6	49,6	49,4	50,0
Employment rate (15 – 64)	65,6	64,6	66,0	65,8	66,5
Unemployment rate (15 – 74)	6,8	7,3	5,6	5,5	5,9
Unemployment rate (15 – 64)	6,8	7,4	5,7	5,6	6,0
<b>Men</b>					
Working-age population (15+)	1 680	1 568	1 566	1 564	1 563
Labour force (15 – 89)	979	897	905	900	906
Employed persons (15 – 89)	920	832	861	857	855
Unemployed persons (15 – 74)	59	65	44	43	50
Inactive population (15+)	701	671	661	665	657
<b>%</b>					
Activity rate (15 – 89)	58,5	57,4	58,0	57,7	58,1
Activity rate (15 – 64)	74,5	73,1	73,8	73,3	73,9
Employment rate (15 – 89)	55,0	53,3	55,2	55,0	54,9
Employment rate (15 – 64)	70,0	67,7	70,1	69,8	69,7
Unemployment rate (15 – 74)	6,0	7,2	4,9	4,8	5,6
Unemployment rate (15 – 64)	6,1	7,3	5,0	4,9	5,7
<b>Women</b>					
Working-age population (15+)	1 829	1 707	1 702	1 698	1 693
Labour force (15 – 89)	865	811	801	796	812
Employed persons (15 – 89)	799	750	750	745	761
Unemployed persons (15 – 74)	66	61	51	51	51
Inactive population (15+)	964	897	902	902	881
<b>%</b>					
Activity rate (15 – 89)	47,9	47,9	47,5	47,3	48,5
Activity rate (15 – 64)	66,3	66,5	66,1	66,0	67,7
Employment rate (15 – 89)	44,2	44,3	44,5	44,3	45,4
Employment rate (15 – 64)	61,2	61,5	61,9	61,8	63,4
Unemployment rate (15 – 74)	7,6	7,5	6,4	6,4	6,3
Unemployment rate (15 – 64)	7,6	7,6	6,4	6,4	6,4

1) The sum total may not equal the sum of individual categories due to the rounding.

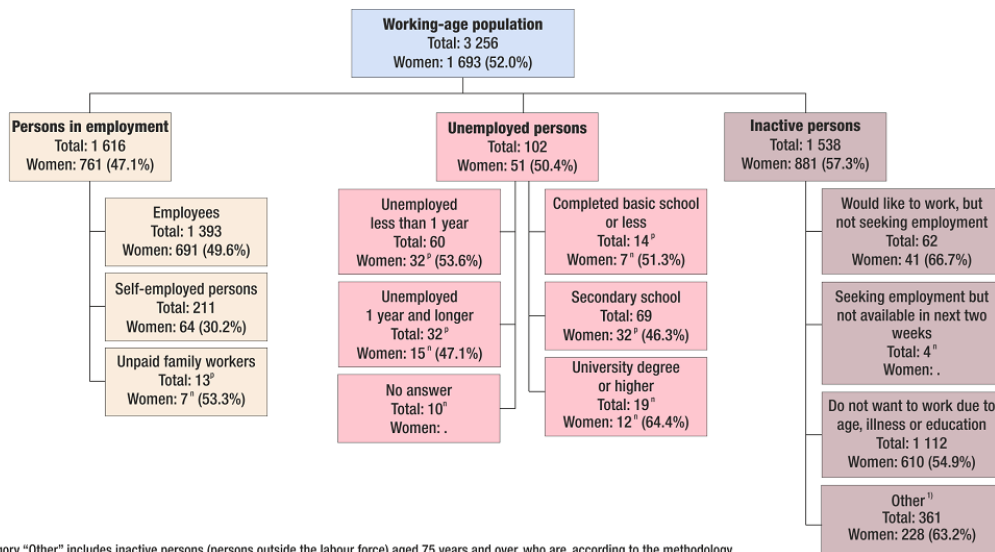
2) A break in time series (more details in the introductory part).

## 2 WORKING-AGE POPULATION, BY ACTIVITY, REGION AND SEX<sup>1)</sup>

'000

	X - XII 2023				
	Republic of Croatia	Pannonian Croatia	Adriatic Croatia	City of Zagreb	North Croatia
<b>Total</b>					
Working-age population (15+)	3 256	843	1 100	647	667
Labour force (15 - 89)	1 718	406	574	370	369
Employed persons (15 - 89)	1 616	366	540	358	351
Unemployed persons (15 - 74)	102	39	33 p	12 n	17 p
Inactive population (15+)	1 538	437	526	277	298
<b>%</b>					
Activity rate (15 - 89)	53,1	48,5	52,6	57,5	55,6
Activity rate (15 - 64)	70,8	66,0	71,7	73,6	72,6
Employment rate (15 - 89)	50,0	43,8	49,6	55,7	53,0
Employment rate (15 - 64)	66,5	59,5	67,4	71,2	69,1
Unemployment rate (15 - 74)	5,9	9,7	5,8 p	3,2 n	4,7 p
Unemployment rate (15 - 64)	6,0	9,8	5,9 p	3,2 n	4,8 p
<b>Men</b>					
Working-age population (15+)	1 563	407	529	301	325
Labour force (15 - 89)	906	219	301	183	203
Employed persons (15 - 89)	855	204	282	175	194
Unemployed persons (15 - 74)	50	15 p	19 n	8 n	8 n
Inactive population (15+)	657	188	228	118	123
<b>%</b>					
Activity rate (15 - 89)	58,1	53,9	57,1	61,1	62,4
Activity rate (15 - 64)	73,9	69,7	74,9	73,9	77,4
Employment rate (15 - 89)	54,9	50,2	53,4	58,5	59,8
Employment rate (15 - 64)	69,7	64,9	70,0	70,7	74,1
Unemployment rate (15 - 74)	5,6	6,8 p	6,5 n	4,2 n	4,2 n
Unemployment rate (15 - 64)	5,7	6,9 p	6,6 n	4,4 n	4,2 n
<b>Women</b>					
Working-age population (15+)	1 693	436	571	346	341
Labour force (15 - 89)	812	187	273	187	166
Employed persons (15 - 89)	761	162	259	183	157
Unemployed persons (15 - 74)	51	24 p	14 n	.	9 n
Inactive population (15+)	881	249	298	159	175
<b>%</b>					
Activity rate (15 - 89)	48,5	43,4	48,4	54,4	49,1
Activity rate (15 - 64)	67,7	62,2	68,4	73,3	67,6
Employment rate (15 - 89)	45,4	37,7	45,9	53,2	46,4
Employment rate (15 - 64)	63,4	54,0	64,8	71,7	63,9
Unemployment rate (15 - 74)	6,3	13,2 p	5,1 n	.	5,4 n
Unemployment rate (15 - 64)	6,4	13,2 p	5,2 n	.	5,5 n

1) The sum total may not equal the sum of individual categories due to the rounding.

**G-2 WORKING-AGE POPULATION IN REPUBLIC OF CROATIA, BY ACTIVITY, FOURTH QUARTER OF 2023, '000**


1) Category "Other" includes inactive persons (persons outside the labour force) aged 75 years and over, who are, according to the methodology, not asked about the details of their inactivity.

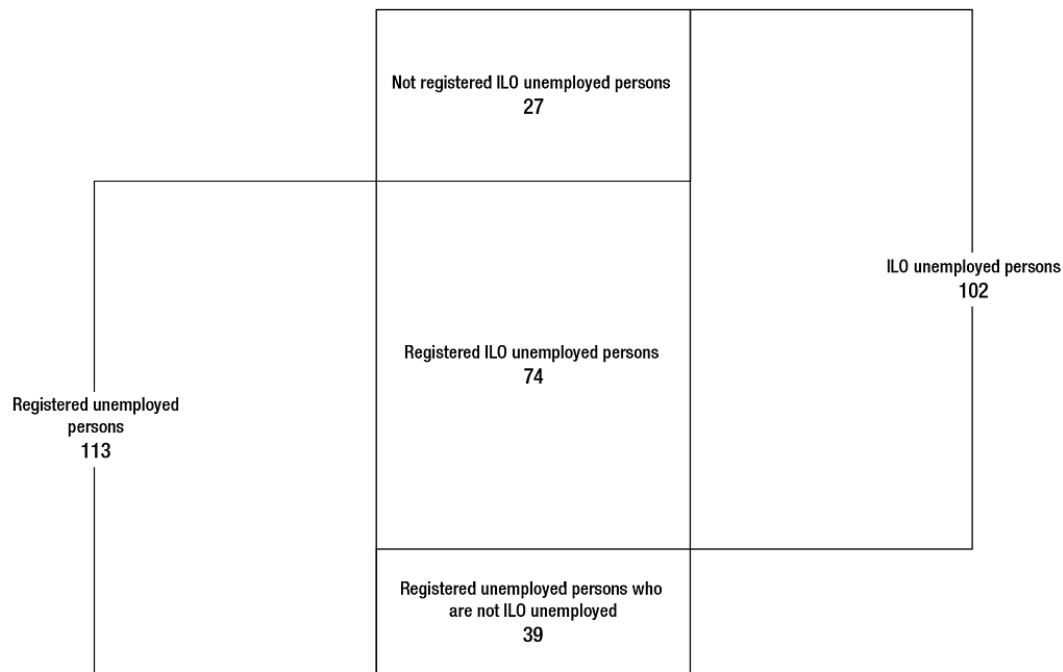
**3 COMPARISON BETWEEN ILO AND REGISTERED UNEMPLOYMENT, BY SEX**

	Total					Men					Women				
	X - XII 2022	I - III 2023 <sup>1)</sup>	IV - VI 2023	VII - IX 2023	X - XII 2023	X - XII 2022	I - III 2023 <sup>1)</sup>	IV - VI 2023	VII - IX 2023	X - XII 2023	X - XII 2022	I - III 2023 <sup>1)</sup>	IV - VI 2023	VII - IX 2023	X - XII 2023
Unemployed persons registered with CES, '000	115	117	101	105	113	50	52	44	43	48	66	65	56	62	65
Of that, persons who are not ILO unemployed	29	29	37	34	39	14	10	17	15	14	15	18	19	19	25
ILO unemployed persons, '000	124	125	95	93	102	59	65	44	43	50	66	61	51	51	51
Of that, persons registered with CES	86	89	64	71	74	35 p	42 p	27 p	29 p	34 p	51	47	37 p	42	41
Of that, persons not registered with CES	38 p	36 p	31 p	22 p	27 p	23 p	23 p	18 n	14 n	17 n	15 n	13 n	13 n	8 n	11 n
ILO unemployment rate (15 - 74), %	6,8	7,3	5,6	5,5	5,9	6,0	7,2	4,9	4,8	5,6	7,6	7,5	6,4	6,4	6,3
Registered unemployment rate, %	6,6	6,9 <sup>2)</sup>	5,8 <sup>2)</sup>	5,9 <sup>2)</sup>	6,4 <sup>2)</sup>	5,4	5,8 <sup>2)</sup>	4,8 <sup>2)</sup>	4,6 <sup>2)</sup>	5,1 <sup>2)</sup>	7,9	8,1 <sup>2)</sup>	6,9 <sup>2)</sup>	7,3 <sup>2)</sup>	7,8 <sup>2)</sup>

1) A break in time series (more details in the introductory part).

2) Rates are calculated from provisional administrative data.

### G-3 COMPARISON BETWEEN ILO AND REGISTERED UNEMPLOYMENT, FOURTH QUARTER OF 2023, '000



The comparison between the unemployment data obtained by the Labour Force Survey and those obtained from the Croatian Employment Service (CES) and other administrative data records shows that, in the fourth quarter of 2023, the unemployment rate obtained from the administrative records (6.4%) was higher than the ILO unemployment rate (5.9%). In the same period, the average number of unemployed persons according to the Labour Force Survey was lower by 11 thousand persons than according to the Croatian Employment Service data. Since the interviewed persons provided information on their registration with the Croatian Employment Service, the data comparison shows that 74 thousand, or 72.9%, out of the total of 102 thousand ILO unemployed persons were registered, 26.7% were not interested in registering with the Croatian Employment Service and the remaining 0.3% did not respond to the question on the registration. At the same time, 39 thousand, or 34.2%, of the total of 113 thousand persons who were registered with the Croatian Employment Service did not fulfil the international criteria of unemployment.

## NOTES ON METHODOLOGY

### Data sources

Data presented in this First Release have been calculated from the data collected in the Labour Force Survey (LFS).

The Labour Force Survey is the most comprehensive official survey on the labour market characteristics in the Republic of Croatia that is conducted on the sample of randomly selected private households.

Data collected by the Labour Force Survey are related to socioeconomic and demographic characteristics of households, with the special emphasis on the status in activity according to the methodological standards of the International Labour Organisation (employed persons, unemployed persons and persons outside the labour force), activity and occupation characteristics on the current, second and previous job, hours of work and working time, unemployment characteristics and educational attainment characteristics.

The Labour Force Survey is harmonised with the EU regulations and Eurostat's methodology prescribed for the EU-Labour Force Survey (EU-LFS). The Labour Force Survey is binding at the EU level and it is a reference data source that provides observing and comparability of labour market statistics at the international level.

### Background

The Labour Force Survey was introduced in the statistical system of the Republic of Croatia in November 1996 as an annual survey. It was carried out in the same manner in June 1997. From 1998 to 2006 it was carried out by interviewing sampled households every month and data were published for each half-year period.

Starting from 2007, the Labour Force Survey has been carried out continuously on a weekly basis, that is, households are interviewed throughout the year. This means that every week is both a reference and an interviewing, i.e. implementational, week. The Croatian Bureau of Statistics processes and publishes results in quarterly dynamics.

Since the beginning of 2016, the earlier method of data collection on printed questionnaires was replaced by interviewing methods using laptops and phones.

Since the beginning of 2021, the new Regulation (EU) 2019/1700 of the European Parliament and of the Council concerning social statistics and the related Commission Implementing Regulation (EU) 2019/2240 concerning labour force domain have entered into force, repealing Council Regulation (EC) No. 577/98.

Implementation of the new legal background caused changes in the survey, beginning with changes in the survey design, application of strictly prescribed and harmonised order of questions, modification and elimination of the existing questions as well as adding new ones, to changes in the coverage and definitions of employment and unemployment.

In view of the mentioned changes, it was expected that data released before and after the implementation of the new legal background would not be consistent and that the changes would cause breaks in time series. However, the analyses that had been carried out show that there were no breaks in time series and that data from the first quarter of 2021 and onwards are comparable to data for previous periods. A brief review of the approach and methodology applied in the mentioned analyses is accessible at [Methodological summary on the breaks in time series exercise\\_HR](#). The only exception are indicators of working hours, where breaks in time series occurred, making those indicators incomparable to data for previous periods.

### Data collection

The Labour Force Survey is a panel survey conducted on a weekly basis. Every sampled household is interviewed four times over a year-and-a-half period following the 2- (2) -2 rotation scheme. In other words, households are interviewed in two subsequent quarters, omitted from the sample for the next two quarters and then in the next two subsequent quarters they are interviewed again. This allows for timely monitoring of flows of persons at the labour market, in quarterly and annual dynamics. Every household selected into the sample receives an announcement letter from the Croatian Bureau of Statistics.

Interviews are carried out by applying the CAPI and CATI data collection methods.

The CAPI method (Computer-Assisted Personal Interviewing) includes interviewing on laptops "face to face". All households selected into sample for the first time and households that either do not have a telephone/cell phone or do not want, for whatever reason, to be interviewed by telephone are interviewed in this way.

The CATI method (Computer-Assisted Telephone Interviewing) includes interviewing by phone from the CATI Centre. All households that accepted in the first interviewing to be interviewed by phone are interviewed in this way.

Accordingly, interviewers visit sampled addresses every week and conduct interviews on private households living at these addresses. The interview lasts approximately 20 minutes. On the basis of the Official Statistics Act (NN, No. 25/20), all information given by interviewed persons are confidential. The data collected are used for statistical purposes only.

During the COVID-19 pandemic, in the period from the second quarter of 2020 until the second quarter of 2022, the Labour Force Survey was facing difficulties in the collection and processing of data. The data collection was adjusted to the new circumstances and "face-to-face" interviewing using laptops was partly or entirely replaced by telephone interviewing. In announcement letters sent to the selected addresses, households were asked to provide their phone number if it was not available in the phone book in order to contact them later.

### Basic concepts and definitions

The Labour Force Survey measures the economic activity of the population in a short survey period of one week.

**Reference period** is every week in the whole year.

**Target population** includes all persons residing in private households who make the usual population of the Republic of Croatia.

**A household** is a small economic group of persons that is usually, although not always, a group of relatives. There are one-person and multi-person households, providing that the multi-person households consist of two or more persons who jointly reside in a housing unit or a part of it and share costs for food and basic household needs, or jointly contribute to the household income and/or mutually share all or a major part of household costs.

**Working-age population** is comprised of all persons aged 15 years and over.

**Employed persons** comprise persons aged 15 to 89 who, during the reference week, were in one of the following categories:

- a) persons who during the reference week worked **for at least one hour** for pay in cash or in kind, including unpaid family workers
- b) persons having a job or their own business who were **temporarily not at work** due to annual leave, working time arrangements, sick leave, maternity or paternity leave, or persons in job-related training.

Accordingly, a pensioner, a housewife, a student or a person not in formal employment can also be classified as employed persons.

Employed persons are also:

- persons on **parental leave**, either receiving and/or being entitled to job-related income or benefits, or whose parental leave is expected to be three months or less
- seasonal workers **during the off-season**, where they continue to regularly perform tasks and duties for the job or business, excluding fulfilment of legal or administrative obligations
- persons **temporarily not at work** for other reasons where the expected duration of the absence is three months or less
- **persons that produce agricultural goods** whose main part is intended for sale or barter.

Regarding the status in employment, employed persons are classified either as persons in paid employment (employees), as self-employed persons and as unpaid family workers.

**Persons in paid employment** are those who work for an employer in the state or private sector and are paid for their work in cash or in kind.

**Self-employed persons** 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-employment, but work in an enterprise owned by a family member and do not receive a payment for their work. They can also be relatives who do not reside in the same household where the owner of the family business resides.

**Unemployed persons** are those between 15 and 74 years old, who meet the following three criteria:

- a) not employed during the reference week
- b) currently available for work, i.e. were available for paid employment or self-employment before the end of the two weeks following the reference week
- c) actively seeking work, i.e. had either carried out activities in the four-week period ending with the reference week to seek paid employment or self-employment or found a job to start within a period of at most three months from the end of the reference week.

**Active population (labour force)** comprises employed and unemployed persons.

**Inactive population (persons outside the labour force)** comprise persons who are in one of the following categories:

- a) aged below 15
- b) aged 15 to 89 and neither employed nor unemployed during the reference week
- c) aged above 89.

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

**Employment rate** represents employed persons as a percentage of working-age population.

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

In certain tables, the sum total may not equal the sum of individual figures due to the rounding to thousands.

### Changes in the Labour Force Survey since 2021

#### Definition of employment

Until 2020, employed persons included persons who turned 15 years of age and over, while since 2021 and onwards, they have included persons aged from **15 to 89** years.

**Persons temporarily not at work** but have a job to return to after the reason for their absence ceases to exist have been classified since 2021 as employed only if the total expected duration of their absence is three months or less, i.e., if during their absence they continue to receive income or benefit for their work. Until 2020, all persons temporarily absent from work who had a job to return to after the reason for their absence ceased to exist (irrespective of the reason for absence) were classified as employed persons.

**Persons on parental leave** have been classified since 2021 as employed only if they either receive and/or are entitled to job-related income or benefits, or if their parental leave is expected to be three months or less. Until 2020, all persons on parental leave were classified as employed persons.

**Seasonal workers** who did not work in the reference week (**off-season period**) have been classified since 2021 as employed persons if they continue to regularly perform tasks and duties for the job or business, excluding fulfilment of legal or administrative obligations. Until 2020, seasonal workers were classified as employed persons if they signed a

contract/agreement with an employer to return to the same job at the beginning of the new season and/or if they continued to receive at least 50% or more of income or benefits during the off-season.

**Persons that produce agricultural goods** whose main part is intended for consumption in own household were, until 2020, classified as employed persons, while they have been excluded from employment since 2021. Only if the main part of their agricultural production is intended for sale or barter are such persons classified as employed.

**Unpaid family workers** who perform work for members of their families have been classified since 2021 as employed persons, even if they do not reside in the same household with their relatives who own the trade/enterprise/agricultural holding, while, until 2020, they were classified as employed only if they resided in a joint household with them.

#### **Definition of unemployment**

Until 2020, unemployed persons included persons who turned 15 years and over, while, since 2021 and onwards, they include persons aged from **15 to 74** years. Changes in the definition of unemployment and inactivity derive from the explained definitions of employment.

#### **Questionnaire design**

In order to improve the comparability of data across countries, a unique, strictly prescribed and harmonised sequence of questions has been applied for defining of major survey categories (employed persons, unemployed persons, persons outside of the labour force).

Further on, new questions have been introduced (e.g., questions related to migrations, economic and organisational dependence of self-employed persons, etc.). Some questions have been removed, e.g., questions related to the situation of the respondent a year prior to the interview and certain questions concerning informal education characteristics). Particular questions and answers offered to respondents have been changed in order to achieve standardisation of questions in the Labour Force Survey with those in other surveys in the social statistics domain.

In addition, certain blocks of questions have been modified more substantially, e.g. the block of questions related to working hours (contracted working hours have been monitored since 2021 along with usual and actually worked ones, etc.). Moreover, the location of certain blocks of questions in the questionnaire has also been changed.

#### **Survey and administrative sources**

Besides survey data on employment and unemployment, the Croatian Bureau of Statistics also publishes data on employment and unemployment according to administrative sources in the Republic of Croatia (including registered unemployment rate).

#### **The following text provides methodological characteristics that cause mutual differences between data on employed persons.**

**Source and coverage:** until 2016, data from administrative sources were based on monthly and annual statistical surveys (RAD-1 and RAD-1G forms) covering employed persons in legal entities of all types of ownership, government bodies and bodies of local and regional self-government units on the territory of the Republic of Croatia. The monthly survey covers 70% of all employed persons in each NKD 2007 division. Since 2016, data on employed persons in legal entities have been gathered by processing data from the "Report on Income, Income Tax and Surtax as well as Contributions for Mandatory Insurances" (JOPPD form) in effect since 1 January 2014 and are not comparable to previously published monthly data. Data on employed persons in crafts and trades and free-lances as well as on employed insured persons – private farmers are taken over from the records on active pension insurance beneficiaries kept by the Croatian Institute for Pension Insurance. The Labour Force Survey results are estimated on the basis of a representative statistical sample of private households in the Republic of Croatia.

**Reference period:** administrative data on employed persons refer to the last day of the previous month, while the Labour Force Survey data are related to a reference week.

**Observation period:** administrative data are processed and published in monthly dynamics, while the Labour Force Survey results are related to a quarterly period.

**Definition of employed persons:** administrative sources apply the formal definition of employment (persons who have signed the work contract with the employer for a fixed or unspecified period of time, irrespective of type of ownership and of whether they work full time or less than full time), while the Labour Force Survey shows employed persons as all persons who were, in the reference week for at least one hour, engaged in any work for payment in cash or in kind, as well as those who were absent from work during the reference week, but had a job to return to with the same employer after the reason for absence no longer existed.

**Released data:** administrative data on employed persons are published monthly in the First Release "Persons in Paid Employment, by Activities" and in the Statistics in Line on the web site of the Croatian Bureau of Statistics.

The First Release "Active Population in the Republic of Croatia" is the publications in which survey results on employed persons are published in the quarterly dynamics. The RAD-1G annual survey data are also published at lower territorial levels, while the Labour Force Survey results are available at HR\_NUTS 2021 classification levels – HR\_NUTS 2.

#### **The Croatian Bureau of Statistics of the Republic of Croatia publishes data on unemployed persons taken over from administrative sources as well as those obtained through the Labour Force Survey. These data differ due to the following methodological characteristics.**

**Source and coverage:** data on registered unemployment are obtained from the Register of Unemployed Persons kept by the Croatian Employment Service, while the Labour Force Survey results are collected by interviewing private households. Register contains data on all unemployed persons in the Republic of Croatia, while the Labour Force Survey results are estimated on the basis of the representative statistical sample.

**Reference period:** the Register data refer to the last day of each month, while the Labour Force Survey data are collected for each reference week.

**Observation period:** the Register data are taken over in monthly dynamics, while the Labour Force Survey results are processed and published for a quarterly period.

**Definitions of unemployed persons:** registered unemployed person is a person aged from 15 to 65 years who is fully or partly capable to work, who is not employed, who is actively seeking job and who is available for work, and a person who meets the criteria as defined in provisions of the Labour Market Act and is registered with the Croatian Employment Service. According to the Labour Force Survey, an unemployed person is, in line with the international definition, either a person who did not perform any work for payment in cash or in kind in the reference week, and was actively seeking job in the course of four weeks before the interview and is prepared to start performing an offered job in the following two weeks or a person who has found a job and will start working in the next three months.

**Released data:** data on registered unemployment and registered unemployment rate are published monthly in the First Release "Persons in Employment, by Activities" and in the Statistics in Line on the web site of the Croatian Bureau of Statistics. The First Release "Active Population in the Republic of Croatia" is a publication in which the comparison of unemployment rate obtained from the Labour Force Survey results and the one from administrative sources are published. At the same time, the Croatian Employment Service publishes administrative data on unemployment at lower territorial levels, while the Labour Force Survey data are available at HR\_NUTS 2021 classification levels – HR\_NUTS 2.

The data show that the unemployment rate based on the administrative data sources is higher than the Labour Force Survey rate. This is, on one hand, due to the fact that some categories of population formally classified as unemployed or inactive are nevertheless active, and on the other, administrative sources, besides actually unemployed persons, include a significant share of persons who are not classified as unemployed according to the definition of the Labour Force Survey, but are through this status entitled to some social or economic rights and benefits.

#### **Classifications used**

a) The National Classification of Activities, 2007 version, comparable to the international Statistical Classification of Economic Activities in the European Community, NACE Rev. 2, was used in the coding of economic activities.

b) The National Classification of Occupations 2010, NKZ 10., comparable to the International Standard Classification of Occupations, ISCO-08, was used in the coding of occupations.

#### **Coverage and comparability**

Data from the 1991 Census of Population, Households and Dwellings in the Republic of Croatia were used as a sample frame in the period from 1996 to 1999. In this period, the parts of Croatian territory with still ongoing war operations at the time when survey was prepared could not be included in the sample frame.

The database of the Croatian Electrical Utility containing data on households spread on the whole Croatian territory was used as a sample frame for 2000 and 2001. Hence, for the first time since 2000, the sample and the Labour Force Survey results have related to the whole of the Republic of Croatia.

Starting from the first half-year of 2002, the sample frame based on the Census of Population, Households and Dwellings in the Republic of Croatia in 2001 data had been used for the Labour Force Survey, while since the beginning of 2014, the new sample frame based on the data from the Census of Population, Households and Dwellings in the Republic of Croatia in 2011 has been in use.

The Labour Force Survey methodology determines that the population residing in institutions (such as homes, convents, hospitals for long-term treatments, etc.) is not included in the sample frame.

#### Data revision

In order to achieve consistency and comparability of data for 2014 and onwards with already published data for previous years, the weighting revision has been done on the data for the period from 2007 to 2013, i.e., the data have been weighted according to the results of the Census of Population, Households and Dwellings in the Republic of Croatia in 2011 by using the calibration method. The data were published in the First Release "Active Population in the Republic of Croatia, 2007 – 2013" of 23 December 2014.

Due to the availability of new and more updated estimates of the total population of the Republic of Croatia, the Labour Force Survey data from the fourth quarter of 2015 to the fourth quarter of 2016 have been revised in order to make them in line with the demographic data on the Republic of Croatia. These data are published in the First Release of 11 April 2017, while the data for the remaining three quarters of 2015 are available in the Statistics in Line.

#### Sample design

The Labour Force Survey is based on the random sample of private households. In the period from 1996 to 2006, the sample was separately defined for each period, that is, the interviews were not repeated, which means that the sample did not have a panel component. Since 2007, the panel component has been introduced in the sample design and households have been repeatedly interviewed four times. However, since the beginning of 2014, the repeated interviewing of previously selected households has been abandoned due to changes in the methodology of processing and implementation of the Labour Force Survey. Having in mind that the Census of Population, Households and Dwellings in the Republic of Croatia in 2011 has been used as a new sample frame, all households in the first quarter of 2014 were selected for the first time, but the interviewing dynamics remained the same.

Since 2014 the new sample design has been determined. The sample consists of four separately selected subsamples, rotation groups (panels). The sample design is two-stage and stratified. The sample frame is stratified in seven strata at HR\_NUTS 2021 classification levels – HR\_NUTS 2 and further separated into urban and rural parts. The random sample of inhabited dwellings is selected in two stages and the sample design used is a two-stage cluster sampling. Before selecting the sample, the so-called segments are formed. Segments are territorial units formed by grouping of one or several neighbouring enumeration districts, which were established for the purpose of carrying out the Census of Population, Households and Dwellings in the Republic of Croatia in 2021.

In the first stage, the random sample of segments is chosen from each stratum and in the second one, the random sample of inhabited dwellings within the selected segments.

Since the beginning of 2021, the sample size had gradually been enlarged by adding 325 new households in each panel, i.e., a part of the sample interviewed for the first time. This enlargement continued until the second quarter of 2022.

In the fourth quarter of 2023, there were 8 580 dwellings selected in the sample. All members of private households permanently living in these dwellings and accepting to participate in the Labour Force Survey were interviewed. In the fourth quarter of 2023, there were 9 362 persons aged 15 years and over interviewed in 4 540 households.

#### Weighting

The weighting procedure is carried out in order to calculate the estimate for the whole household population. This procedure provides for the compensation of the design and sample size impact as well as the impact of the non-response of households to the Labour Force Survey.

Since the beginning of 2014, the new process of weighting the collected data has been determined. In the first phase of the process, the calculation included the weights of the selection of units into the sample taken over from both sampling stages (segments and dwellings) and, in the second one, the weights due to the adjustment to the non-response of units included in the sample. In the last phase of weighting, the final weights calculated in the first two phases were calibrated at the population distribution estimates by age groups, sex and statistical spatial units at 2<sup>nd</sup> level. Since the first quarter of 2023, the final weights were calibrated according to the Census of Population, Households and Dwellings in the Republic of Croatia in 2021, which was updated with data on live births and deaths as well as on population migrations in the Republic of Croatia, whereas for previous quarters the final weights were calibrated according to the 2011 Census.

The calibration can be described as a process of reweighting aimed at balancing the population estimates by age groups, sex and classification levels of HR\_NUTS 2021 – HR\_NUTS 2 from the Labour Force Survey so that these estimates of the survey data correspond to the totals of the entire population, that is, to the distribution of the population of the Republic of Croatia by age groups, sex and classification levels of HR\_NUTS 2021 – HR\_NUTS 2 from the Census of Population, Households and Dwellings in the Republic of Croatia in 2021.

The overall non-response rate in the fourth quarter of 2023 was 43.1% and the refusal rate was 23.1%.

The following table shows estimates, standard errors of estimates, 95% of confidence intervals and the variation coefficients for the activity rate, employment rate and unemployment rate.

## 4 ESTIMATES AND PRECISION MEASURES FOR THE MOST IMPORTANT INDICATORS OF ECONOMIC ACTIVITY OF POPULATION, FOURTH QUARTER OF 2023

%

	Estimate	Standard estimation error	Confidence interval (95%)	Variation coefficient
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



## Abbreviations

COVID-19	COrona Vlrus Disease-19
EC	European Community
EU	European Union
HR_NUTS 2021 – HR NUTS 2	National Classification of Statistical Regions, 2021 version – 2nd level statistical regions
ILO	International Labour Organisation
ISCO	International Standard Classification of Occupations
NACE	Statistical Classification of Economic Activities in the European Community
NKD 2007	National Classification of Activities, 2007 version
NN	Narodne novine, official gazette of the Republic of Croatia
NUTS	common classification of territorial units for statistics
'000	thousand

## Symbols

.	not zero, but extremely inaccurate estimation
n	inaccurate estimation
p	less accurate estimation

### Published by the Croatian Bureau of Statistics, Zagreb, Ilica 3, P. O. B. 80

Phone: (+385 1) 48 06 111

Press corner: [press@dzs.hr](mailto:press@dzs.hr)

Persons responsible:

Dubravka Rogić-Hadžalić, Director of Demographic and Social Statistics Directorate

Lidija Brković, Director General

Prepared by:

Branka Špoljarić, Marina Munitić, Anita Pavlović, Marija Mišir, Ivana Maričić, Ivana Levačić and Sandra Truntić

### USERS ARE KINDLY REQUESTED TO STATE THE SOURCE.

Customer Relations and Data Protection Department

Information and user requests

Phone: (+385 1) 48 06 138, 48 06 154, 48 06 115

E-mail: [stat.info@dzs.hr](mailto:stat.info@dzs.hr)

Subscription

Phone: (+385 1) 21 00 455

E-mail: [prodaja@dzs.hr](mailto:prodaja@dzs.hr)