November 2023

EMPLOYMENT AND UNEMPLOYMENT
Provisional data

- In November 2023 the number of both employed and inactive people rose, while unemployed persons fell.

- On a monthly basis, the increase of employment (+0.1%, +30 thousand) concerned women and people aged 35 or more, while youngest decreased and men were substantially stable. Overall, the employment rate remained unchanged at 61.8%.

- In the last month, the drop in the number of unemployed persons (-3.3%, -66 thousand) involved both sexes and all age groups, with the exception of the 25-34 age group. The unemployment rate decreased to 7.5% (-0.2 p.p.), the youth rate to 21.0% (-2.5 p.p.).

- In November, the rise in the number of inactive people aged 15 to 64 (+0.4%, +48 thousand) concerned both genders and people aged less than 35. The inactivity rate grew to 33.1% (+0.1 p.p.).

- In the period September-November 2023, with respect to the previous quarter (June-August 2023), employment increased (+0.6%, +130 thousand).

- On a quarterly basis, an increase was registered for unemployed persons (+0.7%, +14 thousand) while inactive people aged 15-64 years dropped (-1.1%, -137 thousand).

- Compared with November 2022, the number of employed persons rose by 2.2% (+520 thousand), the growth concerned both genders and all age groups except 35-49 years; the employment rate showed an increase of 1.3 p.p. .

- On a yearly basis, the rise of employed people was accompanied by a fall of both unemployed people (-3.6%, -71 thousand) and inactive persons aged 15-64 (-3.6%, -459 thousand).

TABLE 1. EMPLOYMENT, UNEMPLOYMENT AND INACTIVITY RATES BY SEX
November 2023, seasonally adjusted data

	Percentage values	Months on previous months		Month on same month a year ago
		Percentage points		
		Nov23 Oct23	Sep-Nov23 Jun-Aug23	Nov23 Nov22
MALES				
Employment rate (aged 15-64)	70.8	0.0	+0.3	+1.1
Unemployment rate	6.7	-0.1	-0.1	-0.2
Inactivity rate (aged 15-64)	24.0	+0.1	-0.3	-1.2
FEMALES				
Employment rate (aged 15-64)	52.9	+0.1	+0.3	+1.4
Unemployment rate	8.5	-0.4	+0.1	-0.7
Inactivity rate (aged 15-64)	42.1	+0.1	-0.4	-1.1
TOTAL				
Employment rate (aged 15-64)	61.8	0.0	+0.3	+1.3
Unemployment rate	7.5	-0.2	0.0	-0.4
Inactivity rate (aged 15-64)	33.1	+0.1	-0.3	-1.1

CHART 1. EMPLOYED
January 2018 – November 2023, absolute values in millions, seasonally adjusted data
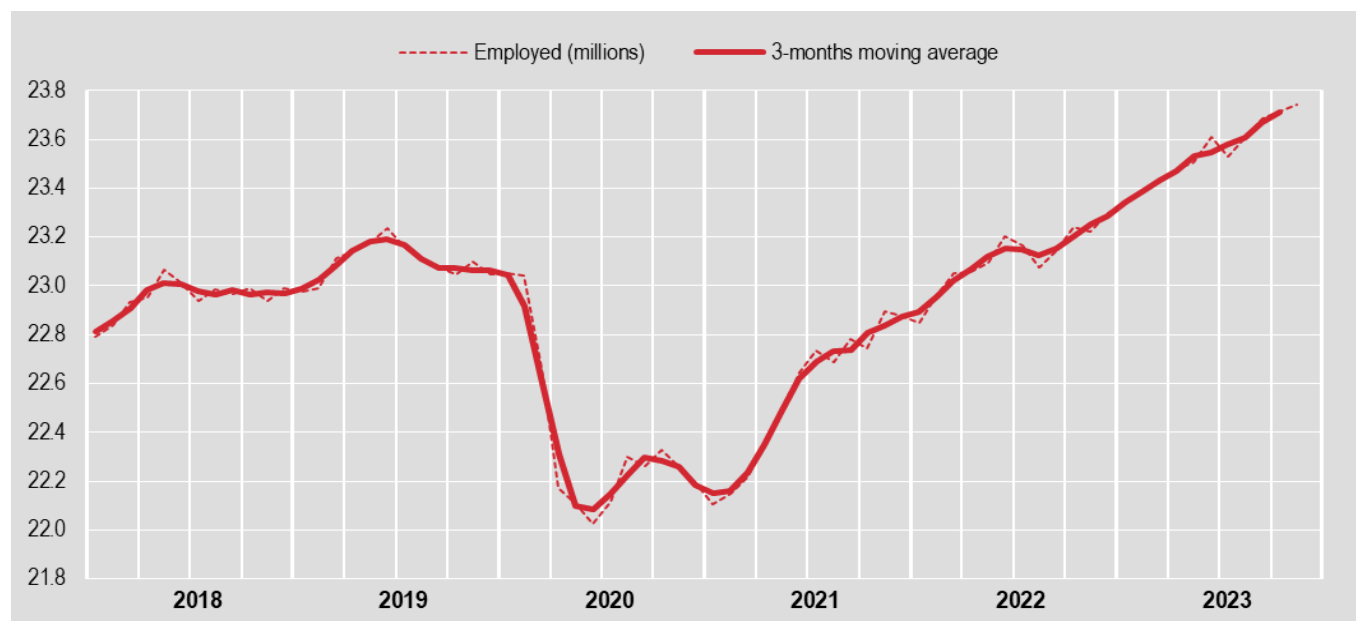

CHART 2. UNEMPLOYMENT RATE
January 2018 – November 2023, percentage values, seasonally adjusted data

CHART 3. INACTIVE POPULATION AGED 15-64
January 2018 – November 2023, absolute values in millions, seasonally adjusted data
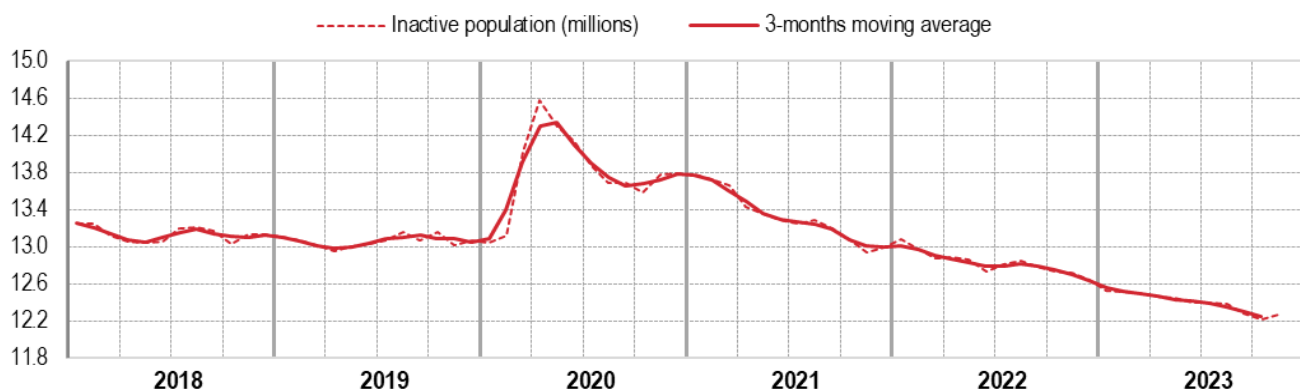
TABLE 2. POPULATION BY SEX AND EMPLOYMENT STATUS
November 2023, seasonally adjusted data

	Absolute values (thousands)	Months on previous months				Month on same month a year ago	
		Nov23 Oct23 (absolute)	Nov23 Oct23 (percentage)	Sep-Nov23 Jun-Aug23 (absolute)	Sep-Nov23 Jun-Aug23 (percentage)	Nov23 Nov22 (absolute)	Nov23 Nov22 (percentage)
MALES							
Employed	13,693	+7	0.0	+84	+0.6	+263	+2.0
Unemployed	974	-21	-2.1	-5	-0.5	-15	-1.5
Inactive (aged 15-64)	4,464	+24	+0.5	-61	-1.3	-228	-4.9
FEMALES							
Employed	10,049	+24	+0.2	+47	+0.5	+258	+2.6
Unemployed	934	-45	-4.6	+19	+2.0	-57	-5.7
Inactive (aged 15-64)	7,801	+24	+0.3	-76	-1.0	-231	-2.9
TOTAL							
Employed	23,743	+30	+0.1	+130	+0.6	+520	+2.2
Unemployed	1,909	-66	-3.3	+14	+0.7	-71	-3.6
Inactive (aged 15-64)	12,265	+48	+0.4	-137	-1.1	-459	-3.6

TABLE 3. POPULATION BY AGE GROUP AND EMPLOYMENT STATUS
November 2023, seasonally adjusted data

	Absolute values (thousands)	Months on previous months				Month on same month a year ago	
		Nov23 Oct23 (absolute)	Nov23 Oct23 (percentage)	Sep-Nov23 Jun-Aug23 (absolute)	Sep-Nov23 Jun-Aug23 (percentage)	Nov23 Nov22 (absolute)	Nov23 Nov22 (percentage)
AGED 15-24							
Employed	1,174	-2	-0.2	+4	+0.4	+19	+1.7
Unemployed	312	-50	-13.8	-9	-2.5	-45	-12.5
Inactive	4,314	+52	+1.2	+12	+0.3	+55	+1.3
AGED 25-34							
Employed	4,202	-15	-0.4	+14	+0.3	+71	+1.7
Unemployed	482	+6	+1.3	+9	+1.9	-9	-1.8
Inactive	1,459	+9	+0.6	-23	-1.6	-65	-4.3
AGED 35-49							
Employed	8,771	+20	+0.2	-10	-0.1	-47	-0.5
Unemployed	640	-10	-1.5	0	+0.1	-11	-1.7
Inactive	2,021	-11	-0.5	-50	-2.4	-198	-8.9
AGED 50 AND OVER							
Employed	9,596	+27	+0.3	+123	+1.3	+477	+5.2
Unemployed	474	-13	-2.6	+13	+2.8	-7	-1.4
Inactive	17,743	-15	-0.1	-69	-0.4	-225	-1.3
Inactive aged 50-64	4,470	-3	-0.1	-76	-1.7	-250	-5.3

TABLE 4. EMPLOYMENT, UNEMPLOYMENT AND INACTIVITY RATES BY AGE GROUP
November 2023, seasonally adjusted data

	Percentage values	Months on previous months		Month on same month a year ago
		Percentage points		
		Nov23 Oct23	Sep-Nov23 Jun-Aug23	Nov23 Nov22
AGED 15-24				
Employment rate	20.2	0.0	0.0	+0.2
Unemployment rate	21.0	-2.5	-0.5	-2.6
Unemployment ratio	5.4	-0.9	-0.2	-0.8
Inactivity rate	74.4	+0.9	+0.1	+0.6
AGED 25-34				
Employment rate	68.4	-0.2	+0.2	+1.2
Unemployment rate	10.3	+0.2	+0.1	-0.3
Unemployment ratio	7.8	+0.1	+0.1	-0.1
Inactivity rate	23.7	+0.1	-0.4	-1.0
AGED 35-49				
Employment rate	76.7	+0.2	+0.3	+1.3
Unemployment rate	6.8	-0.1	0.0	-0.1
Unemployment ratio	5.6	-0.1	0.0	0.0
Inactivity rate	17.7	-0.1	-0.3	-1.3
AGED 50-64				
Employment rate	64.1	+0.1	+0.5	+2.1
Unemployment rate	5.0	-0.1	+0.1	-0.2
Unemployment ratio	3.3	-0.1	+0.1	0.0
Inactivity rate	32.6	0.0	-0.6	-2.1

TABLE 5. EMPLOYED, UNEMPLOYED, INACTIVE POPULATION, EMPLOYMENT, UNEMPLOYMENT AND INACTIVITY RATES
October 2022 – October 2023, revisions of month on previous month changes

YEAR	MONTH	Employed	Unemployed	Inactive population aged 15-64	Employment rate aged 15-64	Unemployment rate	Inactivity rate aged 15-64
2022	October	0.0	-0.2	0.0	0.0	0.0	0.0
	November	-0.1	+0.8	0.0	0.0	+0.1	0.0
	December	0.0	-0.5	0.0	0.0	0.0	0.0
2023	January	0.0	0.0	0.0	0.0	0.0	0.0
	February	0.0	-0.1	0.0	0.0	0.0	0.0
	March	0.0	-0.1	0.0	0.0	0.0	0.0
	April	0.0	-0.1	0.0	0.0	0.0	0.0
	May	0.0	-0.1	0.0	0.0	0.0	0.0
	June	0.0	-0.2	0.0	0.0	0.0	0.0
	July	0.0	-0.2	0.0	0.0	0.0	0.0
	August	0.0	-0.1	0.0	0.0	0.0	0.0
	September	+0.1	-0.5	0.0	0.0	0.0	0.0
	October	0.0	0.0	0.0	0.0	0.0	0.0

Employed persons: comprise persons between the ages of 15 and 89 who fall into one of the following categories:

- persons who, during the reference week, worked for at least one hour for pay or profit, including unpaid family workers;

- persons who, during the reference week, are temporarily absent from work because on vacation, on flexible hours (vertical part-time, recovery work hours, etc.), on sick leave, on mandatory maternity/paternity leave, or on employer-paid vocational training;

- persons on parental leave, who receive and/or are entitled to work-related income or benefits, regardless of the duration of the absence;

- seasonal workers who during the off-season continue to regularly perform tasks and duties necessary for the continuation of the business, excluding the fulfilment of legal or administrative obligations;

- persons temporarily absent for other reasons in all cases where the expected duration of absence is three months or less.

Employment rate: the percentage of employed persons in relation to the corresponding total population.

Inactive persons (persons outside the labour force): comprise persons neither employed nor unemployed, according to the above definitions of employment and unemployment.

Inactivity rate: the percentage of inactive persons in relation to the corresponding total population.

Labour force: comprises employed and unemployed persons.

Months on previous months: change compared with the previous month (quarter).

Month on same month a year ago: change compared with the same month a year ago.

Reference week: week to which the collected information are referred (usually the one before the interview).

Seasonally adjusted data: data from which, using specific statistical methods, the effects of recurring seasonal influences (due to meteorological factors, customs, legislation, etc.) and calendar effects (if significant) have been removed. This treatment of a time series is needed to analyze the short-term changes of an indicator.

Unemployed persons: comprise persons aged 15-74 who:

- were not employed during the reference week, according to the definition of employment provided above;

- have been actively seeking work, i.e., have taken actions to search for paid employment or self-employment during the four-week period ending with the reference week or have found a job to begin within three months or less of the end of the reference week (including seasonal workers who plan to return to their jobs);

- are available to work before the end of the two weeks following the reference week.

Unemployment rate: the percentage of unemployed persons in relation to the corresponding labour force.

Methodological note

Introduction and regulatory framework

The Labour force survey is a sample inquiry conducted through interviews on households, and its main goal is to estimate the main aggregates of the labour supply, employed and unemployed.

The main characteristics of the survey, from methodological aspects to the definition of the variables and indicators, are harmonised at the European level, and consistent with the international standards defined by the ILO. The survey is regulated by specific acts of the Council of the European Commission, the main of which is Regulation (EU) 2019/1700 of the European Parliament and of the Council, which applies from 1 January 2021 (for further information on the Framework Regulation, Delegates Acts and Implementing Acts, see https://www.istat.it/en/archivio/255370).

The survey is included in the National Statistical Program (edition in force: NSP 2020-2022. Update 2021-2022), published in the Official Journal - general series - no. 44 of 21 February 2023 – Ordinary Annex no. 7).

Reference population, survey and analysis unit

The reference population is composed by all the individuals aged 15 and older, belonging to de facto households whose head resides in the selected municipality. Therefore, members who permanently live together, including hospices, children's homes, religious institutes, barracks, etc. are excluded from the reference population.

The survey unit is the *de facto* household, defined as a group of people who are usually cohabiting, whether related or not to other members of the private household, that share household income or household expenses with other household members.

The unit of analysis of the monthly Employment and Unemployment press release is each individual of 15 years of age or more (statistics using the family as the unit of analysis are also produced on an annual basis).

Sample design

The sample design is a two stages one, respectively of municipalities and households, with a stratification of first stage units. All municipalities with populations above a pre-defined level for each province, known as self-representative, are present in the sample with a probability equal to one. Municipalities whose populations are below the aforementioned thresholds, known as non-self-representative, are grouped into strata. They enter in the sample through a random selection mechanism that provides the extraction of one non-self-representative municipality from each stratum. For each sample municipality, a simple random sample of households is selected from the civil registry list.

From the third quarter of 2012, a new sampling design was introduced, that provided the update of the stratification information, and the introduction of a random rotation of sample municipalities.

Since January 2004, the survey is continuous, that is, the information is collected with reference to all the weeks of each quarter. The quarterly sample is uniformly divided between the three months, taking into account the number of weeks that compose each month (respectively 4 or 5). The reference month is composed of weeks, from Monday to Sunday, that occur for at least four days in the calendar month.

Each household is interviewed for two consecutive quarters, temporarily leaves the sample for the two successive quarters, then is interviewed again for other two quarters. That means that approximately 50% of the households are interviewed again after 3 months, and 50% after 12 months, except for non-response. In total, each household remains in the sample for a period of 15 months. Considering that the transition probabilities from inactivity to labour force of individuals above 74 years of age are negligible, to reduce statistical burden on this target population, from 1 January 2011, households composed by only inactive persons older than 74 years of age are not interviewed again.

Data collection

The interview is conducted through a CAPI (*Computer assisted personal interview*) and CATI (*Computer assisted telephone interview*) mixed technique. The first interview of each household is conducted with the CAPI technique, while subsequent interviews are conducted with the CATI technique (except for families without telephone or with a foreign family head). In general, the interview is conducted in the week following the reference week or, less frequently, in the three following weeks. Certain survey questions, due to the difficulty in the response or the sensitivity of the subject, provide the right not to respond. Further information on the Labour force survey, and the questionnaire used to collect the data are available at the following link: http://www.istat.it/it/archivio/8263.

Data processing: framework, tools and techniques

The month of November 2023 runs from Monday 30 October to Sunday 3 December 2023.

The estimator used for the production of monthly estimates is the *regression composite estimator*[1]. It is an estimator that may be effectively used in case of longitudinal surveys with partially overlapping sample, and that, using the longitudinal component, improves the efficiency of both the level estimates and the estimates of variations between months.

In occasion of the February 2021 release, the whole time series of monthly data were provisionally back-recalculated using a macro approach that took into account the changes in the definitions introduced by the new EU Regulation. The final version of this back-recalculation has been disclosed with December 2021 relase, and it is also consistent with the new intercensual population. All the activities related to this back-recalculation on time series were carried out with the contribution of the Eurostat Grant (number 826320): 'Quality improvement and breaks in time series exercise for the LFS in view of the entry into force of the new IESS regulation — 2018-IT-LFS QUALITY BREAKS'.

To properly analyse the data in the short-term, all the monthly data reported in the press release are subject to a monthly seasonal adjustment procedure, always including the latest available data, and updating the estimate of the models. With reference to only seasonally-adjusted data, therefore, variations in previously consolidated months could occur (whose non-seasonally-adjusted estimates have become definitive), which arise from the replication of the seasonal adjustment procedure with the addition of the latest available data.

The TRAMO-SEATS algorithm is adopted for the seasonal adjustment procedure; the version implemented in the software JDemetra+ is used.

The level figures of the survey, processed in units, are rounded-off to the thousands in the absolute values and variations. The variations are calculated on unit data, and not on data rounded-off to the thousands. In the percentage variations and rates, as well as in the differences in percentage points, values are rounded-off to the first decimal. The variations in percentage points between the rates are calculated on the rates with all the decimals before being rounded[2].

Output: main measures of analysis

The labour force survey aims to produce estimates on participation in the labour market.

The reference population is divided into three comprehensive and mutually exclusive groups[3]: employed persons, consistently with ILO standards, are composed of people who have performed at least one hour of paid work in the reference week (in addition to people absent from work in that week); unemployed persons (or persons in search of employment), who actively seek employment and would be available to begin working; inactive persons (or non-labour force), who do not work and are not seeking employment (or would not be available to begin work), for example, because they are involved in studying activities, retired or devoted to the care of their home and/or family[4]. Employed and unemployed persons together, constitute the labour force, that is the part of the population active in the labour market.

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[1] Singh, Kennedy and Wu (2001) Regression composite estimation for the Canadian labour force survey with a rotating panel design, Survey Methodology 27, 33-44.

[2] For example, in the current press release, the youth unemployment rate in November 2023 is equal to 21.022 which comes to 21.0 when rounded-off. The same rate in October 2023 was 23.558 and it is reported in the monthly time series attached to the press release as 23.6 (Table 1). The difference between the November 2023 and October 2023 data is therefore -2.536. Given the rounding-off rules, the variation reported in Table 4 is -2.5 percentage points, and not -2.6 points, as it would be if considering the difference between the two already rounded rates.

[3] Because of the increased age of compulsory schooling (Law 296/2006), from the first quarter of 2007, data on individuals of 15 years of age contains neither employed or unemployed persons. The number of fifteen-year-old employed persons, or of those seeking employment, is traditionally completely negligible. The regulatory change therefore does not lead to any break in the time series of indicators of the 15-64 year-old population.

[4] See glossary for the definitions.

The definition of unemployment and the principles for the formulation of the questions necessary to identify employed and unemployed persons are reported in the Commission Implementing Regulation (EU) 2019/2240.

The monthly press release on Employment and Unemployment disseminates the estimates on the total aggregates, breakdowns by sex and age class, in addition to the analyses of employed persons by professional status and permanent/temporary job.

In addition, the participation rates in the labour market are analysed. The employment rate measures the share of population that has a job: in an economic point of view, it represents the part of the labour supply that has met the demand, in relation to the population. The unemployment rate is given by the ratio between the unemployed persons and the labour force: it therefore represents the share of the labour force that has not met the demand, in relation to the labour force itself. The inactivity rate measures the share of population that does not participate in the labour market.

The same variables, to a greater degree of territorial detail, together with other variables, are analysed on quarterly and annual basis in the "Labour Market" press release.

Accuracy of the estimates

For the purpose of evaluating the accuracy of the estimates produced by a sample survey, it is necessary to take into account the sampling error that arises from observing the variable of interest only on a part (sample) of the population. This error may be expressed in terms of absolute error (*standard error*) or relative error (the absolute error divided by the estimate, which is called the variation coefficient, VC). In this paragraph, the punctual estimate and its relative error are reported for each of the main variables of interest.

TABLE A. ERRORS OF NON-SEASONALLY ADJUSTED ESTIMATES OF THE MAIN INDICATORS
November 2023, non-seasonally-adjusted data

	Punctual estimate	Relative error (VC)
Employed (thousands of units)	23,769	0.003074
Unemployed (thousands of units)	1,868	0.023312
Inactive 15-64 years of age (thousands of units)	12,273	0.005582
Employment rate 15-64 years of age (percentage value)	61.92	0.002930
Unemployment rate (percentage value)	7.31	0.023059
Inactivity rate 15-64 years of age (percentage value)	33.08	0.005582

From these it is possible to build a confidence interval that, with a certain level of confidence, contains the true, but unknown value of the parameter subject to estimation. The confidence interval is calculated by adding and subtracting the absolute sampling error to its punctual estimate, multiplied by a coefficient that depends on the confidence level; considering the traditional confidence level of 95%, the corresponding coefficient is 1.96.

Table A shows the relative errors (VC) of the non-seasonally-adjusted estimates of the main indicators referring to the last month.

The web page of the press release contains an Excel file that shows the table with the relative errors referred to the non-seasonally adjusted monthly estimates of the main indicators, calculated from January 2018.

The main statistical institutes do not publish sampling errors referring to seasonally adjusted estimates. In some cases, the sampling errors of the non-seasonally-adjusted estimates are used, considering that these are quite similar to those related to the corresponding seasonally adjusted estimates. Istat is conducting studies to verify whether this approach is also applicable to the indicators issued in this note.

Through simple calculations, it is possible to derive the confidence intervals with a confidence level of 95% (=0.05). These intervals include, therefore, the unknown population parameters with a probability of 0.95. The following table illustrates the calculations for the construction of the confidence intervals of the estimates of employed persons and the unemployment rate.

TABLE B. ILLUSTRATIVE CALCULATION OF THE CONFIDENCE INTERVAL
November 2023, non-seasonally-adjusted data

	Employed (thousands of units)	Unemployment rate (%)
Punctual estimate:	23,769	7.31
Relative error (VC)	0.003074	0.023059
Interval estimate		
Half breadth of the interval:	(23,769 x 0.003074) x 1.96 = **143**	(7.31 x 0.023059) x 1.96 = **0.33**
Confidence interval lower bound:	23,769 - 143 = **23,626**	7.31 - 0.33 = **6.98**
Confidence interval upper bound:	23,769 + 143 = **23,912**	7.31 + 0.33 = **7.64**

Data revision policy

The monthly estimates are released at approximately 30 days from the reference month, in provisional form. Later, when the quarterly estimates are produced (at approximately 60 days from the quarter), the non-seasonally-adjusted estimates of the three months are recalculated and become definitive. The non-seasonally adjusted monthly estimates are then revised just once, at the moment of release of the first month following the reference quarter.

The monthly seasonally adjusted series are estimated every month including the latest available data, and updating the estimate of the models parameters (*partial concurrent approach*). With reference to the seasonally adjusted data, therefore, revisions are observed every month (see table 5). At the moment of release of the data referring to the month of January of each year, new models for seasonal adjustment are identified.

For further information about revision of short-term statistics, please consult the dedicated section, in particular the revision card https://www.istat.it/it/files//2016/07/scheda-ForzeLavoroMensile.pdf

Information on data confidentiality

The data collected for the labour force survey is protected by statistical confidentiality, and subject to the regulations on the protection of personal data. It may be used, also for subsequent processing, exclusively for statistical purposes by bodies of the National Statistical System, and may also be released for the purpose of scientific research according to the terms and procedures provided by art. 7 of the Ethics Code for the processing of personal data performed in the context of the National Statistical System and by European Community regulation No 831/2002. The estimates, issued in aggregated form, are such that they may not be traced back to the individuals that provided the data, or to which they refer.

Coverage and territorial breakdown

The estimates of the monthly Employment and Unemployment press release are available only for the entire national territory. The quarterly estimates of the "Labour Market" press release are also produced for the geographical areas and for the regions. The annual estimates are also produced for the provinces.

Timeliness

The monthly estimates are produced at approximately 30 days from the reference month, in provisional form, because they are based on a part of the sample referring to the month (over 21,000 households, corresponding to more than 43,000 individuals, for the month of November 2023) and are issued contextually to the monthly data on unemployment released by Eurostat.

Successively, when the quarterly estimates are produced (at approximately 60 days from the quarter), the three-month estimates are recalculated on the entire sample referring to each month, and therefore are considered final.

Dissemination

Following the new European legislation (EU Regulation 2019/1700), which introduces methodological and organizational innovations in the Labour Force Survey, dissemination activities have gone through some changes.

Starting from the December 2021 press release, the monthly seasonally-adjusted and non-seasonally-adjusted data is available on I.Stat, the data warehouse of Istat, in section "Labour and wages/Labour offer".

Anyway, in the I.Stat datawarehouse, the time series of the Labour Force Survey (1997-2020) are still available (section "Labour and wages/Labour offer"). It should be stressed once again that these estimates are not consistent with the new Regulation. Data prior to 1977, in particular from 1959, the year in which the Labour Force Survery started, are available in the Time Series database: http://seriestoriche.istat.it.

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