



FSO Quality Report

06 Industry and services

Neuchâtel, September 2020

Job vacancy statistics

The Federal Statistical Office (FSO) publishes on its website quality reports providing information about the methodology and the definitions used as well as on the quality of the statistical results, thus facilitating interpretation and understanding. The reports are produced first and foremost in order to meet the requirements of Eurostat. For this reason they are only compiled for a limited number of statistics.

The concept of the quality reports is based on the European Statistics System's (ESS) concept of quality contained in the [European Statistics Code of Practice](#).

Statistical presentation

Data description

Job vacancy statistics (JVS) provide information on the level and structure of labour demand. The country transmits to Eurostat the quarterly data on the number of job vacancies and the number of occupied posts as well as provides the quality report under the [JVS framework regulation](#) and the two implementing regulations: the [implementing regulation on the definition of a job vacancy, the reference dates for data collection, data transmission specifications and feasibility studies](#), as well as the [implementing regulation on seasonal adjustment procedures and quality reports](#).

Classification system

The quarterly data are broken down by economic activity (at section level) in accordance with NACE Rev. 2 - Statistical classification of economic activities in the European Community.

Sector coverage

All economic activities defined by NACE Rev. 2, except the activities in NACE section A, activities of households as employers and the of extraterritorial organisations and bodies.

We do not publish results for branch 78 for the moment.

Statistical concepts and definitions

A 'job vacancy' is defined as a paid post that is newly created, unoccupied, or about to become vacant:

- for which the employer is taking active steps and is prepared to take further steps to find a suitable candidate from outside the enterprise concerned; and
- which the employer intends to fill either immediately or within a specific period of time.

'Active steps to find a suitable candidate' include:

- notifying the job vacancy to the public employment services,

- contacting a private employment agency/head hunters,
- advertising the vacancy in the media (for example internet, newspapers, magazines),
- advertising the vacancy on a public notice board,
- approaching, interviewing or selecting possible candidates/potential recruits directly,
- approaching employees and/or personal contacts,
- using internships.

'Specific period of time' refers to the maximum time the vacancy is open and intended to be filled. That period shall be unlimited; all vacancies for which active steps are continuing on the reference date shall be reported.

An 'occupied post' means a paid post within the organisation to which an employee has been assigned.

Statistical unit

Local unit

Statistical population

All Enterprises

Reference area

The whole territory of the country

Time coverage

From 2003 in NACE Rev2

Base period

Not applicable

Statistical processing

Source data

Identification of the source of the data	Data on job vacancies are collected as part of the quarterly business survey (coupled survey).
Coverage	
- Geographical	The whole territory of the country (all 7 regions (NUTS II))
- NACE	Sections B to S
- Enterprise size	All
Definition of the statistical unit	Local unit
Remarks	-
Sampling design	
Base used for the sample	Swiss Business Register from the FSO
Sampling design	Two stage sampling, first stage enterprise, second stage local unit. Design of sampling weight at the first stage like a stratified sampling, while sample selection by poisson sampling. (Sample selection in the FSO sample coordination system for enterprise surveys is based on Poisson sampling.) If an enterprise is selected for the sample, then also all its local units (single stage cluster sampling)
Retention/renewal of sampling units	Once a year
Sample size	19 000 enterprises / 66 000 local units
Stratification	By NACE Rev.2, regions, class sizes (at enterprise level)
Other sources	
Maintenance agency	The State Secretariat for Economic Affairs (SECO) publishes administrative data on job vacancies.
Updating frequency	Monthly
Rules for clearance (of outdated information)	Not applicable
Voluntary/compulsory reporting and sanctions	Compulsory for certain economic activities with high unemployment rates.
Remarks	All enterprises can announce their job vacancies to the SECO on a voluntary basis. There is no sampling and no grossing up.

Frequency of data collection

Reference dates
Last month of each quarter (March, June, September, December)

Data collection

Brief description of the data collection method(s)	Remarks
Data on job vacancies are collected as part of the quarterly business survey (coupled survey). Job vacancies are defined in accordance with Eurostat definitions. Data on job vacancies are collected at the enterprise level. Three channels of data collection are used: files, internet and paper questionnaires.	-

Data validation

Vacancies are validated against the number of occupied posts. Enterprises are contacted for clarifications.

Data compilation

Brief description of the weighting method	Weighting dimensions
<p>Each unit of the sample is given an initial weight upon sample drawing. Initial weights are then corrected for item non-response and callibration.</p> <p>Non-response correction at entreprise level using response homogeneity groups determined using CHAID algorithm. Then callibration is performed at local unit level using the CALMAR macro (INSEE).</p>	<p>Each unit of the sample is given an initial weight upon sample drawing.</p>

Relevance

Definition

The degree to which statistical information meet current and potential needs of the users.

User needs

Description of the national users and their main needs	Remarks
<p>The main users are:</p> <ul style="list-style-type: none"> • the public in general • the media • the Swiss National Bank • the State Secretariat for Economic Affairs (SECO), • various research institutes • regional statistical agencies 	-

User satisfaction

Extent to which the needs of national users are satisfied (voluntary)	Remarks
Not available	-

Completeness

Description of missing variables and missing breakdowns of the variables	<p>Report progress on the implementation measures regarding quarterly job vacancies statistics of Regulation (EC) No 453/2008, including :</p> <ul style="list-style-type: none"> - a detailed plan and timetable for completing implementation - a summary of the remaining deviations from EU concepts
None	<p>Implementation: 1st quarter 2011</p> <p>Deviations: none</p>

Accuracy and reliability

Definition

Closeness of computations or estimates to the unknown exact or true values that the statistics were intended to measure.
Reliability of the data, defined as the closeness of the initial estimated value to the subsequent estimated value.

Sampling error

Sampling error - indicators

Coefficient of variation (taking into account the sampling design) or estimated sampling error for the number of job vacancies (see guidelines).
The coefficient of variation is calculated at the section level of the NACE.

Non-sampling error

Information on variables with non-negligible measurement and processing errors	Information on main sources of (non-negligible) measurement and processing errors and, if available, on methods applied for correction	Estimation bias: An assessment of the non-sampling errors, in terms of the absolute number of vacant posts, for the total number of job vacancies and, where possible, for aggregation level of NACE Rev. 2 specified in Annex 1 to this Regulation and size classes (1-9, 10 + employees).	Remarks
No information	No information	No estimation available	

Coverage error

Description of any difference between the reference population and the study population	Description of classification errors	Description of any difference between the reference dates and the reference quarter	Any other relevant information
None	None	None	-

Measurement error

[see non-sampling error]

Non response error

Unit non-response - rate

Unit response rate
90.4% (4 th quarter 2018)

Processing error

[see non-sampling error]

Imputation - rate

Item imputation rate and methods and, where possible, the effect of imputation on the estimates for the variables transmitted
In general no imputation is performed. However in some special multi-establishment cases, due to practical reasons a model-based imputation was performed to complete missing information in local units. Due to the small amount of treated cases, the impact may be assumed to be very small.

Model assumption error

If modelling is used, include a description of the models used. Particular emphasis should be given to models for imputation or grossing-up to correct for unit non-response.
Initial weights are corrected for item non-response at grossing up using the CHAID algorithm and the CALMAR macro (INSEE)

Seasonal adjustment

Brief description of seasonal adjustment procedures, in particular with regard to the European Statistical System guidelines on seasonal adjustment which have been endorsed and supported by the SPC.

Seasonal adjustment is conducted using X-12 ARIMA in full accordance with the European Statistical System guidelines. The following steps are used:

- a. All series are examined for the existence of a quarterly periodicity in the data. If no such periodicity is detected no adjustment is performed.
- b. For series in which a periodicity is detected, a model is searched and applied
- c. We apply the method of direct adjustment for all levels of data aggregation
- d. Models are checked once a year and adapted if necessary

Data revision - practice

Provide a revision history, including the revisions in the published number of job vacancies and a summary of the reasons for the revisions.

1992-2000: Collection of data on job vacancies was started in 1992, but no data were published until 2000; the publication started in an index form.

2000-2010: The collection of the data was progressively improved and extended to big companies. A first method of correction for non-response was introduced in 2004. Data were still published in index form.

2011: Following the introduction of a new sampling approach in the quarterly business survey and the development of new method for handling non-response (CHAID algorithm), the data are published in absolute figures.

Series in absolute figures are available from the 2nd quarter 2003.

2015: Adaptation of the population, based on the new register based enterprise census. Adaptation of the sampling design and estimation method to meet the new needs.

Annual or biannual adaptations: the series are adapted once the sample has been updated.

Timeliness and punctuality

Timeliness

Time lag - first result

Information on the time span between the release of data at national level and the reference period of the data.

The results are released within 55 days after the end of the reference month

Punctuality

Punctuality - delivery and publication

Deadlines for the respondents to reply, also covering recalls and follow-ups	Period of the fieldwork	Period of data processing	Dates of publication of first results	Remarks
25 days after the reference month	Fieldwork starts 20 days before the end of the reference month and ends 30 days after the reference month	35-40 days after the reference month	55 days days after the reference month	-

Coherence and comparability

Definition

Adequacy of statistics to be reliably combined in different ways and for various uses and the extent to which differences between statistics can be attributed to differences between the true values of the statistical characteristics.

Comparability - geographical

Information on differences between national and European concepts, and – to the extent possible – their effects on the estimation.
No difference with Eurostat concepts

Comparability - over time

Information on changes in definitions, coverage and methods in any two consecutive quarters, and their effects on the estimation.	Remarks
No differences between quarters. Metadata sheets and tables are updated each quarter.	-

Additional information to be provided for the FIRST Quality Report	
Description of the sources used for the back data and the methodology employed	2000-2010: The collection of the data was progressively improved and extended to big companies. A first method of correction for non-response was introduced in 2004.
Description of any differences between the coverage (economic activities, employees, variables) of the back data and that of the current data	None
Description of the comparability of the back data and the current data	Data are harmonised and fully comparable
Remarks	-

Coherence - cross domain

Comparisons of data on the number of vacant jobs from other relevant sources when available, in total and broken down by NACE at section level when relevant, and reasons if the values differ considerably.
Data on JVS from the FSO are fully comparable with Eurostat standards. They considerably differ from the results published by the State Secretariat for Economic Affairs (SECO) which are based on administrative data, since no sampling design, nor grossing up methods are applied in the latter.

Accessibility and clarity

Definition

The conditions and modalities by which users can obtain, use and interpret data.

Publications

Dissemination scheme, including to whom the results are sent	Periodicity of national publication	References for publications of core results, including those with commentary in the form of text, graphs, maps, etc.	Information on what results, if any, are sent to reporting units included in the sample
Results are published in the quarterly JOBSTAT's press release. All tables can be downloaded on the website of the FSO	Quarterly	Quarterly press release "Employment barometer in xxth quarter 20xx" in English, German, French and Italian	None

Quality documentation

Description of and references for metadata provided	References for core methodological documents relating to the statistics provided	Description of main actions carried out by the national statistical services to inform users about the data	Remarks
Metadata are available for download in ad-hoc methodological sheets and tables. Guidelines for publication and limitation on use are sent on request to users.	Methodological documents are available online and can be downloaded on the website of the FSO	No actions carried out	-

Confidentiality

Definition

A property of data indicating the extent to which their unauthorised disclosure could be prejudicial or harmful to the interest of the source or other relevant parties.

Confidentiality - data treatment

Disclosure rules: Brief description of when data have to be deleted for reasons of confidentiality
None

Contact organisation: Federal Statistical Office

Contact organisation unit: www.statistique.admin.ch

Contact name: Sophie Schmassmann

Contact person function: Dissemination

Contact mail address: Federal Statistical Office
10, Espace de l'Europe
CH-2010 Neuchâtel

Contact email address: diffusion.best@bfs.admin.ch

Contact phone number: +41 58 467 25 63