

LABOUR FORCE SURVEY (LFS)

METHODOLOGY

STATISTICAL SERVICE OF CYPRUS

1. Contact	
1.1 Contact organisation	Statistical Service of Cyprus (CYSTAT)
1.2 Contact organisation unit	Labour
1.3 Contact name	Eleni Christodoulidou
1.4 Contact person function	Statistics Officer A'
1.5 Contact mail address	Statistical Service of Cyprus, CY-1444, Nicosia, Cyprus
1.6 Contact email address	echristodoulidou@cystat.mof.gov.cy
1.7 Contact phone number	+357 22602142
1.8 Contact fax number	+357 22661313
2. Metadata update	
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3. Statistical presentation

3.1 Data description

The LFS is a quarterly household sample survey and it is the main source of information about the situation and trends on the labour market in the European Union. The EU-LFS is organised in 12 modules covering demographic background, labour status, employment characteristics of the main job, atypical work, working time, employment characteristics of the second job, previous work experience of persons not in employment, search for employment, main labour status, education and training, situation one year before the survey and income.

The survey's target population consists of all persons in private households, although the variables related to labour market are only collected for persons aged 15 years or older.

The aim of the survey is the collection of data which are useful in the formulation of policy on labour matters (employment, unemployment) and for pursuing and evaluating of the programmes that are applied both by Government and by the European Union.

In particular the survey is promoting the pursuance of:

- (a) The study of the Labour Force structure (unemployed, employed) by economic activity, occupation, professional status, full/part time employment etc.
- (b) The study of the state of employment and unemployment of the population aged 15 years and over in relation with sex, age and level of education.
- (c) The study of the existence or not of a second job for the employed, hours of work etc.

3.2 Classification system

The EU-LFS results are produced in accordance with the relevant international classification systems. The main classifications used are:

- (a) Economic activity (industry): NACE Rev. 2
- (b) Occupation: ISCO 08
- (c) Status in employment: ICSE 93
- (d) Educational Level: ISCED 2011
- (e) Fields of Education: ISCED 1997

3.3 Sector coverage

All economic sectors are covered

3.4 Statistical concepts and definitions

There is no divergence between the national and European concepts and definitions.

The LFS provides population estimates for the main labour market characteristics, such as employment, unemployment, inactivity, hours of work, occupation, economic activity and other labour related variables, as well as important socio-demographic characteristics, such as sex, age and education.

The definitions of employment and unemployment, as well as other survey characteristics follow the definitions and recommendations of the International Labour Organisation.

Some of the main indicators calculated are:

Labour Force / Economically Active Population – The total number of the employed and unemployed persons aged 15 years and over.

Employed – Persons aged 15 years and over who during the reference week worked for at least one hour, as well as persons who had a job but were temporarily absent from work.

Unemployed – Persons aged 15-74 years old who comply to the following standards:

- are without work;
- are available to start work within the next two weeks;
- and have actively sought employment at some time during the previous four weeks.

Inactive – Persons aged 15 and over who are neither employed nor unemployed.

Labour Force participation rate – It is the number of persons in the Labour Force for any group, expressed as a percentage of the total population in the same group.

Employment rate – The number of employed persons for any group expressed as a percentage of the total population in the same

group.

Unemployment rate – The number of unemployed persons of any group expressed as a percentage of the labour force in the same group.

3.5 Statistical unit

Persons

3.6 Statistical population

The survey covers the total population of individuals living in private households only. It does not cover persons residing in collective households (i.e. institutions, homes for the aged, hospitals, monasteries etc.) and conscripts on compulsory military service. The resident population comprises persons who usually reside in Cyprus or intend to stay in Cyprus for at least 12 months. Students who study abroad as well as Cypriots who work abroad are not covered. Foreign armed forces and foreigners who work in embassies or diplomatic missions in Cyprus are also excluded. The sampling frame used for the sample selection is the Census of Population of 2011 households register, updated with the domestic consumers of electricity which were connected after the census date. These were obtained from the Electricity Authority of Cyprus.

3.7 Reference area

Government controlled areas of the Republic of Cyprus.

3.8 Coverage - Time

Data are available as from 1999 since the LFS was carried out for the first time.

From 1999 to 2003 the LFS was conducted in the second quarter of every year.

As from the second quarter of 2004, the LFS was turned into a continuous survey.

3.9 Base period

Not applicable

4. Unit of measure

Most results measure number of persons. Some indicators are reported as rates (employment, unemployment rates). Some variables are reported in other units (ages in years, working time in hours, etc.).

5. Reference period

The LFS is designed as a continuous quarterly survey with interviews spread uniformly over all weeks of a quarter. The reference week starts on Monday and ends on Sunday. By convention, the first week of the year is the week including the first Thursday, and the 1st reference quarter consists of 13 consecutive weeks starting from that week. Therefore the reference quarter corresponds to the calendar quarter. Built in this way, the quarterly sample is spread uniformly over all weeks of the quarter.

Therefore quarterly data refer to each quarter of the year. Annual data refer to the average of all quarters of the year.

6. Institutional mandate

6.1 Legal acts and other agreements

At European level, the principal legal act is the Council Regulation (EC) No 577/98. The implementation rules are specified in the successive Commission regulations. This is the main regulation with provisions on design, survey characteristics and decision making processes.

Council Regulation (EC) No 577/98:

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31998R0577&qid=1515054596796&from=EN>

At national level, Article 3 of the national Statistics Law, No. 15(I) of 2000 defines the functions of the Statistical Service of Cyprus regarding the production and dissemination of official statistics. Moreover, Article 11(1), explicitly stipulates the mandate for data collection and introduces a mandatory response to statistical enquiries by stipulating the obligation of respondents to reply to surveys and provide the data required. This relates not only to national but also to European statistics which, by virtue of Article 15 of the said Law, are incorporated in the annual and five-year programmes of work without any further procedure.

Statistics Law No. 15 (I) of 2000:

http://www.mof.gov.cy/mof/cystat/statistics.nsf/legislation_en/legislation_en?OpenDocument

6.2 Data sharing

Under Gentlemen's agreement, aggregated data can be shared /exchanged between participating organisations and/or international bodies.

7. Confidentiality**7.1 Confidentiality - policy**

Official statistics are released in accordance to all confidentiality provisions of the following:

- National Statistics Law No. 15(I) of 2000 (especially Article 13 on statistical confidentiality).
- Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European statistics and its later amendments (especially Chapter 5 on statistical confidentiality).
- European Statistics Code of Practice (especially Principle 5 on statistical confidentiality).
- CYSTAT's Code of Practice for the Collection, Publication and Storage of Statistical Data.

The Statistical Service is obliged to treat all data collected as confidential. The information is exclusively used for the production of statistics only and no person or public authority has access to the personal data of any of the household members.

Statistics Law No. 15(I) of 2000:

http://www.mof.gov.cy/mof/cystat/statistics.nsf/legislation_en/legislation_en?OpenDocument

Regulation (EC) No 223/2009 on European statistics (consolidated text):

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02009R0223-20150608&qid=1504858409240&from=EN>

European Statistics Code of Practice:

<http://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-32-11-955>

Code of Practice for the Collection, Publication and Storage of Statistical Data:

http://www.mof.gov.cy/mof/cystat/statistics.nsf/dmlquality_en/dmlquality_en?OpenDocument

7.2 Confidentiality - data treatment

The treatment of confidential data is regulated by CYSTAT's Code of Practice for the Collection, Publication and Storage of Statistical Data.

Code of Practice for the Collection, Publication and Storage of Statistical Data:

http://www.mof.gov.cy/mof/cystat/statistics.nsf/dmlquality_en/dmlquality_en?OpenDocument

8. Release policy

8.1 Release calendar

Notifications about the dissemination of statistics are published in the release calendar, which is available on CYSTAT's website. The annual release calendar, announced during the 4th quarter of the each year, includes provisional dates which are finalised the week before publication.

Quarterly data are published 82 days after the end of the reference quarter.

8.2 Release calendar access

Link to CYSTAT's release calendar:

http://www.mof.gov.cy/mof/cystat/statistics.nsf/releasecalendar_en/releasecalendar_en?OpenDocument

8.3 User access

According to the Dissemination and Pricing Policy of the Statistical Service of Cyprus (section 2.3) CYSTAT's main channel for dissemination of statistics is the website, which offers the same conditions to everyone and is updated at the same time every working day (12:00 noon). Privileged pre-released access (of no more than 1 day in advance) has been granted to a few selected users for specific statistics. These are specified in the Dissemination Policy (section 2.3).

In addition to the annual release calendar, users are informed of the various statistical releases through the "Alert" service provided by CYSTAT.

Dissemination and Pricing Policy of the Statistical Service of Cyprus:

http://www.mof.gov.cy/mof/cystat/statistics.nsf/dissemination_en/dissemination_en?OpenDocument

9. Frequency of dissemination

The data is disseminated quarterly.

10. Accessibility and clarity

10.1. Dissemination format - News release

A news release is linked to the data.

<http://www.mof.gov.cy/mof/cystat/statistics.nsf/All/94A89E171A72B004C225803E002AF210?OpenDocument&sub=1&sel=1&e=&print>

10.2. Dissemination format - Publications

The quarterly results in excel format are published under the Statistical Theme 'Labour/Employment' at the following link:

http://www.mof.gov.cy/mof/cystat/statistics.nsf/labour_31main_en/labour_31main_en?OpenForm&sub=1&sel=2

10.3. Dissemination format - online database

No on-line database is available

10.4. Dissemination format - microdata access

Statistical micro-data from CYSTAT's surveys are accessible for research purposes only and under strict provisions as described below:

Under the provisions of the Statistics Law, CYSTAT may release microdata for the sole use of scientific research. Applicants have to submit the request form "APPLICATION FOR DATA FOR RESEARCH PURPOSES" giving thorough information on the project for which micro-data are needed.

The application is evaluated by CYSTAT's Confidentiality Committee and if the application is approved, a charge is fixed according to the volume and time consumed for preparation of the data. Micro-data may then be released after an anonymisation process which ensures no direct identification of the statistical units but, at the same time, ensures usability of the data. The link for the application is attached below.

http://www.cystat.gov.cy/mof/cystat/statistics.nsf/dissemination_en/dissemination_en?OpenDocument

10.5. Dissemination format - other

Data are also available in the annual publication of CYSTAT 'Statistical Abstract'.

http://www.mof.gov.cy/mof/cystat/statistics.nsf/publications_en/publications_en?OpenForm&OpenView&RestrictToCategory=110&SrcTp=1&Category=1&Subject=10&SubSubject=0&subsubtext=0&

10.6. Documentation on methodology

Methodological information is available on CYSTAT's website in section Methodology, under the Statistical Theme 'Labour/Employment'.

http://www.mof.gov.cy/mof/cystat/statistics.nsf/labour_31main_en/labour_31main_en?OpenForm&sub=1&sel=3

10.7. Quality management - documentation

Quality reports are available on CYSTAT's website in section Methodology, under the Statistical Theme 'Labour/Employment'.

http://www.mof.gov.cy/mof/cystat/statistics.nsf/labour_31main_en/labour_31main_en?OpenForm&sub=1&sel=3

11. Quality management

11.1 Quality assurance

The quality of statistics in CYSTAT is managed in the framework of the European Statistics Code of Practice which sets the standards for developing, producing and disseminating European Statistics as well as the ESS Quality Assurance Framework (QAF). CYSTAT endorses the Quality Declaration of the European Statistical System. In addition, CYSTAT is guided by the requirements provided for in Article 12 of the Statistics Law No. 15(I) of 2000 as well as Article 12 of Regulation (EC) No 223/2009 on European statistics, which sets out the quality criteria to be applied in the development, production and dissemination of European statistics. Furthermore, the LFS Methodological Manual provides guidelines and standards for the implementation of the surveys in the Member States.

European Statistics Code of Practice:

<http://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-32-11-955>

ESS Quality Assurance Framework (QAF):

<http://ec.europa.eu/eurostat/documents/64157/4392716/ESS-QAF-V1-2final.pdf/bbf5970c-1adf-46c8-afc3-58ce177a0646>

Quality Declaration of the European Statistical System:

http://ec.europa.eu/eurostat/documents/4031688/8188985/KS0217428ENN_corr.pdf/116f7c85-cd3e-4bff-b695-4a8e71385fd4

Statistics Law No. 15(I) of 2000:

http://www.mof.gov.cy/mof/cystat/statistics.nsf/legislation_en/legislation_en?OpenDocument

Regulation (EC) No 223/2009 on European statistics (consolidated text):

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02009R0223-20150608&qid=1504858409240&from=EN>

11.2. Quality management - assessment

The Methodological Manual provided by Eurostat includes the guidelines and standards used by CYSTAT for the implementation of the survey.

12. Relevance**12.1 Relevance - User needs**

The main users include: Government ministries/departments responsible for policy making, international organisations, enterprises, academics/researchers, media/press and the general public.

12.2. Relevance - User Satisfaction

Since 2008 (with the exception of 2010 and 2013) CYSTAT carries out an annual online "Users Satisfaction Survey". The results of the surveys are available on CYSTAT's website at the link attached below.

Overall, the users of statistical data published by CYSTAT are satisfied.

According to the 2016 survey, the quality of unemployment statistics was evaluated as good or very good by 78% of those who used them.

Results of CYSTAT's User Satisfaction Surveys:

http://www.mof.gov.cy/mof/cystat/statistics.nsf/dmlquality_en/dmlquality_en?OpenDocument

12.3 Completeness

Data for all the variables are collected therefore all statistics that are needed are available and comply fully with the relevant regulations and guidelines. They are published both at national and at EUROSTAT level.

13. Accuracy

13.1. Accuracy - overall

The results of the LFS are subject to sampling and non sampling errors. Information on errors is provided through the quality reports.

The sample in the Cyprus LFS is proportionally distributed according to the number of households in 9 strata. The variables used for stratification are the region at district level and the classification in urban-rural areas.

The overall accuracy and reliability of the LFS data is high. This is assured by the sampling design and methods of data collection. Subject to Eurostat's quality screening, figures on employment and unemployment fulfill the Eurostat requirements concerning reliability.

13.2. Sampling error

Coefficient of variation (CV) Annual estimates

Sampling error - indicators - Coefficient of variation (CV), Standard Error (SE) and Confidence Interval (CI)

	Number of employed persons	Employment rate as a percentage of the population	Number of part-time employed persons	Number of unemployed persons	Unemployment rate as a percentage of labour force	Youth unemployment rate as a percentage of labour force	Average actual hours of work per week ^(*)
	Age group: 20 - 64	Age group: 20 - 64	Age group: 20 - 64	Age group: 15 - 74	Age group: 15 - 74	Age group: 15 - 24	Age group: 20 - 64
CV	0.73	0.72	3.43	3.10	3.05	7.16	0.40
SE	2563.26	0.49	1601.30	1671.70	0.40	2.08	0.15
CI ^(**)	346851.40-356899.40	67.77 - 69.70	43604.33 - 49881.41	50733.06-57286.12	12.23 - 13.79	24.97 - 33.12	38.08 - 38.68

(*) The coefficient of variation for actual hours worked is calculated for the sum of actual hours worked in 1st and 2nd jobs, and restricted to those who actually worked 1 hour or more in the reference week.

(**) The value is based on a CI of 95%.

13.3 Non-sampling error

1. Coverage error:

The sample was drawn from the Census of Population frame of 2011. In a post enumeration survey conducted after the census, an undercoverage of 1,97% was estimated.

2. Measurement error:

Errors due to the reporting units and the interviewers are not measured. However, the main methods used to reduce these type of errors are the following:

Error source	Brief comments
Respondent	Assurance to respondents of the confidentiality of the data collected.
Interviewer	In-depth training on the questionnaire is provided and also close contact with the interviewers throughout the survey.
Questionnaire	The questions asked are clear and simple so that they are easily understood by the interviewers and the respondents.

3. Non-response error:

(a) Unit non- response - rates

The total non- response rate is comprised of refusals, non-contacts and other reasons (eg. Language problems).

Divisions of non-response into categories. Quarterly data and annual average				
Quarter	Non response rate (%)	Refusals (%)	Non-contacts (%)	Other reasons(%)
1	4.60	1.79	2.24	0.57
2	4.34	1.70	2.19	0.45
3	4.19	1.49	2.26	0.45
4	4.23	1.24	2.42	0.57
Ετήσια	4.34	1.55	2.28	0.51

(b) Item non-response

There is no item non-response for key variables. All fields are completed.

14. Timeliness and punctuality

14.1 Timeliness

The data is released by CYSTAT 82 days after the end of the reference quarter.

14.2 Punctuality

All scheduled national releases are delivered on time. Both EUROSTAT and National deadlines are respected. The micro-data for each quarter are transmitted to EUROSTAT within the deadline of 84 days.

15. Coherence and comparability

15.1 Comparability - geographical

No discrepancies from geographical concepts and definitions exist, therefore comparability between districts is achieved.

15.2 Comparability - over time

The biggest improvement in the Cyprus LFS was moving from a continuous annual survey run in spring (up to 2003) to a quarterly continuous survey from 2004 onwards. Although improvements in time have brought some time series break, the comparability of the main indicators is high.

15.3 Coherence - cross domain

(a) Coherence with population statistics

The LFS uses population statistics to gross up sample results. The LFS also publishes those data.

Population statistics and EU-LFS demographic statistics are not fully comparable, some conceptual differences must be considered:

- The EU-LFS statistics cover only the population in private households, while population statistics cover the whole population.
- Sometimes the rules for defining the usual resident population differ in the LFS from the rule in population statistics.
- Population statistics refer to particular dates, such as the population at 1 January or mid-year. The EU-LFS statistics refer generally to average population in a quarter or year.

(b) Coherence with employment estimates in National Accounts

LFS and National Accounts are the two main sources of employment data. These sources are not independent; indeed LFS is frequently an input to National Accounts employment estimates. Although the ILO concepts reflect the National Accounts concepts both have their own aims and measurement approaches, which may lead to different results. In addition, other statistics based on business surveys also provide estimates of employment which may differ.

National Accounts are compiled by comparing and combining all the relevant data sources available in the country. This is a key feature of National Accounts: it allows taking the best from each source, increasing coherence and obtaining a more comprehensive result. In addition, there are conceptual differences as well which need alignment/adjustments prior to any integration.

Those scope alignments plus the integration of LFS with other sources leads National Accounts employment to be different from LFS. All in all, National Accounts is judged more suitable to measure employment levels, employment growth and industry breakdowns. LFS is more adequate to measure participation in the labour market (i.e. employment rates, activity rates, flows between employment and unemployment, etc.), demographic or social breakdowns (e.g. by age, gender or educational level) and it is more suitable for socio-demographic studies.

(c) Coherence with employment estimates from business surveys

Business surveys, like structural business statistics (SBS) or short-term business statistics (STS), are focused on production-related variables like output, turnover or value added, but they also produce some estimates of employment. These estimates are different from LFS. There are two broad groups of reasons:

Different scope and different units: business surveys gather information on production units operating in the territory whereas LFS gathers information on people living in the country.

Different measurement strengths: business surveys are based on a business register that may not include small enterprises below a certain threshold. Update and comprehensive coverage in the register of small production units and self-employed persons might be an issue. As business surveys inquire employment simultaneously to other variables like turnover or profits, they are more exposed to underreporting of employment than household surveys. In addition, employment not included in the payroll or in the accounting books, like trainees or family aids, could be left out. On their side, household surveys like LFS do not suffer from those downsides.

(d) Coherence with registered unemployment

Registered Unemployment does not comply to the ILO definition of unemployment as specified in Commission Regulation (EC) No 1897/2000.

It comprises persons without work who register at the Public Labour Offices as unemployed (mainly to receive their unemployment benefit and/or to be entitled to Government programs for the unemployed). Registered Unemployment excludes self-employed persons, persons seeking part-time employment as well as persons seeking work in a specific location (area) and for a specific employer.

Based on the ILO definition, unemployed persons are persons aged 15 to 74 who:

- are without work;
- are available to start work within the next two weeks;
- and have actively sought employment at some time during the previous four weeks (with any of a number of methods).

Therefore Registered Unemployment and LFS unemployment estimates differ considerably both in scope and in measurement. It is worth mentioning that Registered unemployment underestimates all groups of people: young males, young females, old males and old females.

15.4 Coherence - internal

LFS estimates for a given quarterly reference period have full internal coherence, as they are consistent within the micro-data set. There is also coherence between annual and quarterly estimates as annual estimates are produced as average of quarterly results.

16. Cost and Burden

Data collection is carried out by 12 interviewers. Other staff involved: one Statistics Officer A' (the officer in charge of the survey) and one Statistics Officer responsible for monitoring, supervision and coordination of the survey, two supervisors who check the work of the interviewers and one clerk who deals with the day-to-day organisation of the work loads.

17. Data revision

17.1 Data revision - policy

A data revision policy is in place at CYSTAT. It is published on CYSTAT's website, at the following link:

http://www.mof.gov.cy/mof/cystat/statistics.nsf/dissemination_en/dissemination_en?OpenDocument

CYSTAT also publishes a list of scheduled revisions (regular or major revisions), also published on its website, at the following link:

http://www.mof.gov.cy/mof/cystat/statistics.nsf/releasecalendar_en/releasecalendar_en?OpenDocument

17.2 Data revision - practice

Revisions of previously released data are carried out after new population estimates are available.

Major revisions are usually carried out after a population census.

18. Statistical processing

18.1 Source data

The LFS is a rotating random sample survey of persons in private households. Each sample consists of 6 waves, 5 of which are carried over from the previous quarter. Each household is interviewed 6 times consecutively before being rotated out of the sample. The sampling unit is the household and the sampling frame is the Census of Population 2011 Register. The register is updated by adding the new domestic users of electricity from the EAC. The sampling design is stratified and within each stratum simple random sampling of household units is used.

Participation in the survey is compulsory. The ultimate sample size amounts to approximately 3.800 households each quarter. The quarterly sampling rate is 1,5%.

18.2 Frequency of data collection

Since 2004, the survey has quarterly periodicity. From 1999 to 2003 it was an annual survey run in spring.

18.3 Data collection

Data are collected with face-to-face interviews using CAPI in the first wave and with telephone interviews using CATI in all other waves.

18.4 Data validation

Prior to the transmission of the data to EUROSTAT, they are validated by custom-made programs developed with the SAS software. Data are checked for logical flow, valid numbers and values and consistency between household members. Data are also compared to the data of the previous quarter.

18.5 Data compilation

The results are weighted to the number of households and persons of the population.

18.6 Adjustment

No seasonal adjustment or any other adjustment is carried out. Annual results of quarterly variables are produced as simple averages of the quarterly results.

19. Comment

Related Metadata

Annexes