



EUROPEAN COMMISSION
EUROSTAT

Joint Standard Quality Report for Labour Force Survey and Regional Labour Market Statistics

General information

This Quality Report is a combined effort of the units [F2-Labour market statistics](#) and [E2-Regional indicators and geographical information](#) to describe the quality of data collected by these units.

The aim of the quality reports is to establish the current level of knowledge in Eurostat about the quality of the statistical products. The results from the reports will be used for internal summaries of what is known about the quality and where there is lack of quality.

All available information that describes the quality of the product should be reported. If the information is extensive, references should be given for information more detailed. For lack of information on some quality aspects no complementary data has to be collected from the Member States.

The reports should be updated continuously and transmitted to the quality manager once a year.

The structure of the form is according to the quality concept for Eurostat.

Administrative information

Country	LUXEMBOURG
Statistical product (name)	Labour Force Survey and NUTS-3 level estimates of the labour force and the number of unemployed
Reference period	2005
Periodicity of the LFS statistics (monthly, quarterly, annual)	Quarterly
Periodicity of the NUTS-3 statistics	NA
Persons who have filled the present report	Liliane Reichmann - STATEC As our responsible of LFS left STATEC in 2006 and I am only responsible of LFS since october 2006 I filled out this questionnaire as good as I could. If there are problems or questions please let me know

Complete the abbreviations used in the report

Abbreviation	Explanation
CV	Coefficient of variation (or relative standard error)
Y/N	Yes / No
?	Don't know
M?	Member State doesn't know
NA	Not applicable/ Not relevant
NR	No response: Member State doesn't answer to Eurostat request for information
LFS	Labour Force Survey
NUTS	Nomenclature of territorial units for statistics or corresponding statistical regions in the EFTA and candidates countries
NC	No change from last report.

The design and methods used for the LFS

Coverage	The sampling frame covers only private households in Luxembourg. The cross-border workers are not taken into account. The resident population comprises persons registered as residing in one of the communes.
Inclusion/exclusion criteria for members of the household	The household is defined as persons living in the same household, other than subtenants and military personnel returning home at the weekend.
Questions relating to employment status are put to all persons aged ...	The demographic part of the questionnaire is submitted to all the household members. But only the 15-74 years old should be interviewed for the rest of questionnaire.
Reference week	The sample is divided into 52 reference weeks. Once a year, each selected household should be interviewed within 3 weeks from the reference week.
Periodicity of the results	The results are yearly. All the data continuously collected during 52 weeks are aggregated.

Sampling design	Single stage stratified random sample
Base used for the sample	The central population register (RGPP) is used to draw the sample
Primary sampling unit (PSU)	The sampling unit are the households. All the individuals included in the aforementioned households are considered as targets of the survey.
Final sampling unit (FSU)	-
First (and intermediate) stage sampling method	A yearly sample is drawn and spread over 52 weeks. The households are randomly chosen by proportional allocation in each stratum, with the exception of underpopulated strata, but with the constraint that its yearly minimum size be at least 48 households.
Final stage sampling method	-
Overall sampling rate	The yearly sampling rate is 11.24%.
Size of the sample	The sample size is 25,603 households.
Stratification	The strata result from the crossing of the canton and the household size class. There are 13 cantons in Luxembourg. The household size is divided into 4 classes: 1, 2, 3, 4+. So, the product of the number of cantons (13) and the number of size classes (4) gives 52 strata.
Description of the rotation scheme	A rotation scheme is carried out. The amount of 6401 households, which belonged to the previous sample, are incorporated in the sample of 2005

Brief description of the method of calculating the weights	<p>The initial household weight is the inverse of the selection probability in each stratum. According to the general sharing weight method, all the individuals of the same household have the same weight defined above.</p> <p>1. A calibration is performed with CALMAR macro of INSEE-France for correcting the non-response. Among many variables like region (merger of cantons), household class size, age of reference person and citizenship of reference person, we try to find out, by logistic regression, by how much they account for the non-response phenomenon. These variables were selected: canton, size of household, citizenship of the reference person and age of the reference person. Its purpose is to make the distribution of these variables in the sampling frame and in the set of respondents agree. Three "regions" are determined by grouping some cantons: North, Centre, South. The following classes are used for the age: 0-38, 39-49, 50-64, 65+. This calibration is implemented at the household level.</p> <p>2. A final adjustment is carried out for getting more accurate estimates of the variables of interest. It consists in making the most recent distribution of sex * age class * citizenship in the population agree with the distribution of the same variables in the set of respondents. The following age classes are used: 0-14, 15-19, 20-24, 25-39, 40-54, 55-64, 65+. This calibration is implemented at the person level as it will be shown in the following table.</p>
Is the sample population in private household expanded to the total population (including those in collective households)? (Y/N)	N
Gender is used in weighting (Y/N)	Y
Which age groups are used in the weighting (e.g., 0-14, 15-19, ..., 70-74, 75+)?	See above

Which regional breakdown is used in the weighting (e.g. NUTS 3)?	See above
Other weighting dimensions	See above

Data collection methods, brief description	All the interviews are performed by phone. One interview (covering the core variables as well as the ad hoc module variables) lasts in average 10 to 15 minutes per interviewed person.
Participation is voluntary/compulsory?	Voluntary

Publication thresholds, annual estimates

Limit, below which figures cannot be published	500
Limit, below which figures must be published with warning	1200

Brief description of the method used to produce data on unemployment and labour force by NUTS-3 level

Regional level of an individual record (person) in the national data set	NA
Lowest regional level of the results published by NSI	NA
Lowest regional level of the results delivered to researchers by NSI	NA
Brief description of the method which is used to produce NUTS-3 unemployment and labour force data sent to Eurostat?	NA

ADDITIONAL ITEMS FOR THE REPORT TO PARLIAMENT

The information on this sheet is needed for providing the Parliament with relevant information about the implementation of the LFS, according to Article 7 of Council Regulation (EC) No 577/98

"A report on the implementation of this Regulation shall be submitted by the Commission to the Parliament and the Council every three years, beginning in the year 2000. This report shall evaluate in particular the quality of the statistical methods envisaged by the Member States to improve the results or to lighten the survey procedures."

Table RP.1 Variables provided by alternative sources (§2.3)

Add rows if necessary

Year	Variable	Source
2003	NA	
2004	NA	
2005	NA	

Table RP.3 Relative standard error of quarterly changes (§3.2)

National level for estimating changes between two successive quarters for populations representing 5% of the population of working age

IV 2002 - I 2003	NA	IV 2003 - I 2004	NA	IV 2004 - I 2005	NA
I 2003 - II 2003	NA	I 2004 - II 2004	NA	I 2005 - II 2005	NA
II 2003 - III 2003	NA	II 2004 - III 2004	NA	II 2005 - III 2005	NA
III 2003 - IV 2003	NA	III 2004 - IV 2004	NA	III 2005 - IV 2005	NA

Table RP.2 Relative standard error of unemployment (§3.1)

Regional level for estimating unemployment rates representing 5% of the population of working age

WILL BE ESTIMATED FROM TABLE 2.1.2

Table 1.1 Available statistics

Compared to the variables defined by the Commission Regulation (EC) No 1575/2000.

Add rows as necessary.

<i>Variable status</i>	<i>Column</i>	<i>Identifier</i>	<i>Quarter</i>	<i>Type of unavailability</i>	<i>Short comments on reasons for non-available statistics and prospects for future solutions</i>
Quarterly weighting factor is not provided	191/196	Quarterly weighting factor	I,II,III,IV	M	Quarterly weighting factor is not provided cf small countries

Table 1.2.1 Classification and description of users

User	Classification of user	Description of user
1	<i>Institutions:</i>	European level: Commission (DGs, Secretariat General), Council, European Parliament, EMI, other European Agencies. National or regional level: Ministries of Economy or Finance, Other Ministries (for sectoral comparisons), NSIs, etc Multi-national organisations: OECD, UN, IMF, etc.
2	<i>Social actors:</i>	Employers associations, trade unions, lobbies, at the European, national or regional level
3	<i>Media</i>	International, national or regional specialised or for general public, interested both in figures and analyses/comments
4	<i>Researchers, students</i>	Universities, institutes, research centres
5	<i>Enterprises:</i>	for own market research activities or for consultancy services in the information sector.

Table 1.2.2 Users' needs origin

User (from table 1.1)	Needs	Source	Reference document
	In term of theoretical concepts		
1,2,3,4,5	Labour force, unemployment, occupation, educational level by age class, gender etc.	Council Regulation n° 577/98 and Council Regulation n° 1260/1999	see: Source

Table 1.2.3 Users needs satisfaction

User (from table 1.1)	Measure-ment of user satisfaction? (Y/N)	State to what extend these needs have been fulfilled in the users' eyes	Reference document on user satisfaction
1	N		
2	N		
3	N		
4	N		
5	N		

Table 1.2.4 Do we as specialists consider that the statistics provided to/ used by the users are relevant?

User (from table 1.1)	Y/N	If Y or N, explain why.
1,2,3,4,5	Y	LFS is one of the main data bases providing detailed labour market statistics

Table 1.2.5 Do you anticipate some changes for the future needs?

User (from table 1.1)	Y/N	If Y give a short description
1	N	
2	N	
3	N	
4	N	
5	N	

Table 2.1.1 Coefficient of variation (CV) Quarterly and annual estimates

For the calculation of the CV it is necessary to take into account the design effect.

CV of national quarterly aggregates (in %)					
Quarter	Number of employed	Number of part-time employed	Number of unemployed	Rate of unemployment	Average number of hours actually worked per week
1	NA				
2	NA				
3	NA				
4	NA				
Annual	NA	we deliver as soon as available			

Reference on software used :

not available for the moment we have a contract

Reference on method of estimation:

with a new institute.

Table 2.1.2 Coefficient of variation (CV) Annual estimates at NUTS-2 Level

For the calculation of the CV it is necessary to take into account the design effect.

Add rows as necessary.

CV of regional (NUTS-2) annual aggregates (in %)					
Region (NUTS-2)	Number of employed	Number of part-time employed	Number of unemployed	Rate of unemployment	Average number of hours actually worked per week
NA					

Table 2.1.3 Coefficient of variation (CV) Annual estimates at NUTS-3 level

Only to be completed by countries using the LFS to produce NUTS-3 level data for Eurostat

Add rows as necessary.

Region (NUTS-3)	Sample size (number of responding persons)	CV of regional (NUTS-3) annual aggregates (in %)		
		Number of persons in the labour force	Number of unemployed	Unemployment rate
NA				

For the calculation of the CV for NUTS-3 regions, the national design effect can be used as an approximation of the true regional design effect. Please indicate if this approximation is used (Y/N):

Table 2.2.1 Frame quality, coverage rates and methodological notes

Give brief comments on the main problems of frame quality and the rates of undercoverage/ overcoverage/ classification errors of the statistical units

Brief comments on the main problems of frame quality	Some households of the sampling frame RGPP were out of scope	
Rate of under-coverage	N	
Rate of over-coverage	Y	
Rate of classification errors	0.86%	
Reference on frame errors	They were deleted both from the sample and the sampling frame.	

Table 2.2.2.a Errors due to the reporting unit and the interviewer

Is there information on these errors (Y/N)	N	
Is there some measurement of the errors? (Y/N)	N	
If Y give brief comments on the assessment of the errors	Reporting unit	
	Interviewer	

Table 2.2.2.b Errors due to the medium (questionnaire)

Date of the last update of the questionnaire	yearly update
Date of the last pilot survey in order to test the questionnaire	NA
Number of respondents to the pilot survey	NA
Report from cognitive laboratory available (Y/N)	N

Table 2.2.2.c Are there any methodological notes on the measurement errors?

Methodological notes (Y/N)	N
Main references	

Table 2.2.2.d Main methods of reducing measurement errors

Error source	Brief comments
Respondent	As citizenship of the contacted reference person is usually known, the interviewers were chosen according to their language skills when possible.
Interviewer	A specific training course is given to the interviewers (purpose and methodology of the survey, codification and classification to use, sensitive questions, etc.). Interview calls are monitored and controlled to allow continued improvement.
Questionnaire	Every year, the questionnaire is revised. Modifications are made if necessary. Interviews are carried out by CATI, which allows interactive checking of the answers.
Other	Plausibility and consistency checks are made at the end of the survey. Corrections, if needed, are made before releasing the data.

Table 2.2.2.e Number of interviewers and % of proxy interviews

Average number of interviewers per quarter	
% of proxy interviews per year	60.90%

Table 2.2.3a Information available about data capture errors and the error rates

Table 2.2.3a is only for countries not using Computer assisted data collection.

Info. on data capture errors (Y/N/NA)	Error rate in %	Comments
NA		

Table 2.2.3b Information available about codification errors and the error rates

Info. on data codification errors (Y/N/NA)	Error rate in %	Comments
Y	Minimal	Codification is checked by frequency distributions of classifications. This is part of standard data control procedures. Corrections, if needed, are made before data release.

Table 2.2.3c Information available about editing errors and the error rates

Info. on errors during the editing phase (Y/N/NA)	Error rate in %	Comments
Y	Minimal	Editing checks are incorporated as interactive part in CATI. Corrections, if needed, are made before data release

Table 2.2.3d Information available about other processing errors and the error rates

Info. on other process errors (Y/N/NA)	Error rate in %	Comments
Y	0%	Corrections, if needed, are made before data release

Table 2.2.4.a Availability and calculation of non-response. Annual average

Is non response rate available (Y/N)	Y
Is the non response rate weighted? (Y/N)	N
If weighted, state the definition of the weights	

Table 2.2.4.b Rates of non response. Annual average

Wave	Non response rate in %
Yearly	67%

Table 2.2.4.c Availability and calculation of non-response at NUTS-3 level

Only to be completed by countries using the LFS to produce NUTS-3 level data for Eurostat

Is non response rate available (Y/N)	NA
Is the non response rate weighted? (Y/N)	
If weighted, state the definition of the weights	

Table 2.2.4.d Rates of non response. Annual average

Only to be completed by countries using the LFS to produce NUTS-3 level data for Eurostat
Add rows as necessary.

NUTS-3 region	Non response rate in %
NA	

Table 2.2.4.e Divisions of non-response into categories. Quarterly data

Quarter	Non response rate (%)	Refusals (%)	Non-contacts (%)	Other reasons(%)
yearly	67.00%	16%	21%	30%

Table 2.2.4.f Patterns of non response. Underestimation bias

Information available (Y/N)	N
Tendency to underestimate the main characteristics (Y/N)	
If Y give the characteristics	

Table 2.2.4.g Patterns of non response. Overestimation bias

Information available (Y/N)	N
Tendency to overestimate the main characteristics (Y/N)	
If Y give the characteristics	

Table 2.2.4.h Methods used for adjustments for statistical unit non-response

Describe method used, mentioning which auxiliary information or stratification is used	A calibration is performed with the CALMAR macro of INSEE-France for correcting the non-response. Among many variables like region (merger of cantons), household class size, age of reference person, citizenship of reference person, we try by logistic regression to find out which of them accounts for most of the non-response phenomenon. Afterwards, these variables are chosen: canton, size of household, and age of reference person. Its purpose is to make the distribution of these variables in the sampling frame and in the set of respondents agree. Three regions are determined by grouping some cantons: North, Centre, South. The following class are used for the age: 0-38, 39-49, 50-64, 65+. This calibration is implemented at household level.
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Table 2.2.4.i Methods used for adjustments for statistical item non-response

Add rows as necessary.

Characteristic	Imputation (Y/N)	If imputed, rate of non response	If imputed, describe method used, mentioning which auxiliary information or stratification is used
None			

Table 2.2.4.j References to methodological notes on non response rates and their treatment

Available (Y/N)	References
Y	Méthode généralisée du partage des poids (Lavallée)

Only for those countries using registered unemployment to produce NUTS-3 level data on unemployment or labour force.

2.3.1 Assessment of errors (*bias*) in the registration of unemployment

NA

Quarterly LFS data

Table 3.1.a Reference period, transmission date and coverage

Quarter	Main dates in the national production process		
	Date of data collection beginning	Date of end of the quality check for statistics sent to Eurostat	Date of national publication
1	4th week in January	middle of June	Only yearly results
2	4th week in April	middle of Septembre	
3	4th week in July	middle of Decembre	
4	4th week in Octobre	middle of March	

Table 3.1.b Reason for late delivery to Eurostat

To be completed only in case of late delivery or if some important variables, such as regions of household or place of work, NACE, ISCO or ISCED, are not classified in time.

Quarter	Describe reasons for late delivery mentioning all bottle-necks
1	NA
2	
3	
4	

Table 3.1.c Ways for improving timeliness

To be completed only in case of late delivery or if some important variables, such as regions of household or place of work, NACE, ISCO or ISCED, are not classified in time.

Quarter	Describe ways for improving timeliness
1	NA
2	
3	
4	

NUTS-3 level LFS data on unemployment and labour force

Table 3.2.a Reference period, transmission date and coverage

<i>Main dates in the national production process</i>		
<i>Date of data collection beginning</i>	<i>Date of end of the quality check for statistics requested by Eurostat</i>	<i>Date of national publication</i>
NA		

Table 3.2.b Reason for late delivery to Eurostat

To be completed only in case of late delivery of NUTS-3 level data on unemployment and labour force.

<i>Describe reasons for late delivery mentioning all bottle-necks</i>
NA

Table 3.2.c Ways for improving timeliness

To be completed only in case of late delivery of NUTS-3 level data on unemployment and labour force.

<i>Describe ways for improving timeliness</i>
NA

4.1 A list of type and frequency of publications

Main results (activity and employment rate by age classes, gender and citizenship) of annual LFS data with comments are published by STATEC in:

1. Note de conjoncture : La situation économique au Luxembourg - Évolution récente et perspectives (annual publication)
2. Bulletin du STATEC (studies of general interest).

4.2 Conditions of access to data

Means, support, marketing conditions, possible restrictions, existing service-level agreement, etc.

Tables are provided to users. Restricted access to anonymised micro-data is given to researchers under secured conditions within Statec.

4.3 Accompanying information to data

Documentation, explanation, quality limitations, graphics etc.

Documentation and methodological explanations are provided to the users via a number of media: paper, files, email and by phone.

4.4 Further assistance available to users

See 4.3

4.5 Possible improvements, compared to the previous situation.

NA

Table 5.1.a Has there been any change at the concept level that would affect comparability with a previous reference time?

Besides changes in concepts and definitions this could include changes in coverage, changes in administrative rules and legislation, changes in classifications, changes in geographical boundaries etc.

Enumerate all concepts or definitions that have been changed since last year

Characteristic	Change in concepts compared to previous year (Y/N)?	Impact of the changes on the statistics.
NA		

Table 5.1.b Has there been any change at the measurement level that would affect comparability with a previous reference time?

For example changes in data collection, **weighting scheme**, **new design**, use of auxiliary information

Enumerate all measurements that have been changed since last year

Characteristic	Change in measurement (Y/N)?	Impact of the changes on the statistics.
NA		

Table 5.1.c If there is a change over time what is the quantitative estimate of this effect?

Give the estimates (in percentage) for the characteristic and level of classification according to 5.1.a and 5.1.b. Indicate if statistics are fully (F) or partially (P) adjusted for the changes.

Characteristic	Quantitative estimate (Y/N)	Estimation of effect for aggregates (%)	Estimation of adjustment F/P for aggregate
NA			

Table 5.1.d If there is a change over time is the statistics revised?

Characteristic	Are estimated differences published (Y/N)	Are statistics revised (Y/N)	If statistics are revised, give brief comment on the method of revision
NA			

Table 5.2.a Is there any divergence of the statistical concept from European concepts

(European concept or National proxy concept used) List all concepts where any divergences can be found

Add rows as necessary.

Characteristic	Divergence (Y/N)	If yes description of the impact of the divergence on the statistics
	N	

Table 5.2.b What are the quantitative assessments of the differences?

Give a summary of consequences and effects on the statistics. Give the estimates (in percentage) for the characteristic and level of classification according to 5.2.a. Indicate if statistics are full (F) or partial (P) adjusted for the changes.

Add rows as necessary.

Characteristic	Estimation of effect for aggregates (%)	Estimation of effect for first level of breakdown			Estimate of adjustment F/P for aggregates
		Median	Min	Max	
NA					

Table 5.3.a Improvements in 2004 that have been made on the questionnaire so that it complies with the Twelve Principles.

Add rows as necessary.

Principle	Description of improvement

Table 5.3.b Improvements in 2004 that have been made on the questionnaire so that it accurately transcodes to the EU list of variables

Add rows as necessary.

Variable	Description of improvement

Table 5.3.c Improvements in 2004 that have been made so that the transmitted data comply with the EU definition of unemployment.

Add rows as necessary.

Concept	Description of improvement

Table 6.1 Coherence of LFS data with National Accounts data

	Description of difference in concept	Description of difference in measurement	Give an assessment of the effects of the differences	Give references to description of differences
Total employment	Although employment in LFS and National Accounts (NA) are both in line with the ILO guidelines (XIII. ICLS, Geneva 1982), the following conceptual differences are relevant: - 1. Residence (LFS) vs. domestic Concept (NA). Many non-resident workers are coming to Luxembourg from bordering countries. - 2. Inclusion (NA) / Exclusion (LFS) of the institutional population.	LFS is a sample survey (primary statistics), sampling errors occur. Employment in NA is based on all statistical information available (secondary statistics); additional estimates are made for under-coverage of employment in basic sources (e.g. for hidden economy). Estimation errors may occur.	1. Non resident employees represent about 40% of total employees (domestic concept) 2. Census 2001 registered 7500 persons living in non-private households	Indicateur rapide série L (emploi salarié) Note de conjoncture : La situation économique au Luxembourg - Évolution récente et perspectives Annuaire statistique du STATEC Recensement de la population 2001- Résultats détaillés
Total employment by NACE				
Number of hours worked	NA	NA	NA	NA

Table 6.2 Coherence of LFS data with Business statistics data

	<i>Description of difference in concept</i>	<i>Description of difference in measurement</i>	<i>Give an assessment of the effects of the differences</i>	<i>Give references to description of differences</i>
<i>Total employment</i>	<i>STATEC produces a range of different business statistics. There are various differences in concepts and measurement when compared with the LFS (periodicity, sample survey or total enumeration, coverage of employment and sectors of economy, inclusion/exclusion of small enterprises, etc.).</i>		NA	
<i>Total employment by NACE</i>			NA	
<i>Number of hours worked</i>			NA	

Table 6.3a Coherence of LFS data with registered unemployment

Description of difference in concept	The registered unemployment is a legal concept that differs from the ILO unemployment definition. In the LFS, the ILO-unemployment concept is used.
Description of difference in measurement	<p>In the LFS the measurement of unemployment is made on the declaration of persons living in private households, institutional households are not covered. Sample error influences LFS-results.</p> <p>Registered unemployed who are not ILO-unemployed: Registered unemployed who do not meet the availability criterion used in the LFS; Registered unemployed working more than 1 hour during the reference week; Registered unemployed who do not actively search for a job.</p> <p>ILO-unemployed who are not registered unemployed: not registered unemployed at the public employment offices but using other job search methods; Unemployed 65 years and over.</p>
Give references to description of differences	<p>Note de conjoncture 1/2006: Economie luxembourgeoise en 2005, chap. 6</p> <p>Note de conjoncture 1/2005: Economie luxembourgeoise en 2004, chap. 6</p>

Table 6.3b Assessment of the effect of differences of LFS unemployment and registered unemployment

	Give an assessment of the effects of the differences
Overall effect	<p>Number of unemployed persons : LFS 9096</p> <p>Registered (annual average) 8948</p>
Men under 25 years	985 (LFS)
Men 25 years and over	3103 (LFS)
Women under 25 years	1057 (LFS)
Women 25 years and over	3951 (LFS)
Regional distribution (NUTS-3)	NA

8.1 Cost

Table 8.1a Number of staff involved

	<i>Full-time equivalents</i>
Total	2.5
- of which professional and managerial	

Table 8.1b Costs for the NSI

	<i>Thousands</i>	<i>Currency used:</i>
Total costs	NR	

8.2 Burden

Table 8.2a Duration of the interview

	<i>Minutes</i>		
	<i>Total</i>	<i>First wave</i>	<i>Later waves</i>
Average time spent in the household	Questions of the core questionnaire and those of the ad hoc questionnaire make part of one integrated interview. 10-15 minutes pr person		
Core questionnaire (pr person)			
Ad hoc questionnaire (pr person)			

Note: This table should only show the burden on the respondents. Not time spent in the field to contact the household or fill out administrative forms.

Table 8.2b Number of units

	<i>Number</i>		
	<i>Total</i>	<i>First wave</i>	<i>Later waves</i>
Households visited over the year	8450		
Persons interviewed over the year	22506		
Persons interviewed for the ad hoc module over the year	15024		