



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)	<b>Labour Force Survey and NUTS-3 level estimates of the labour force and the number of unemployed</b>
Reference period	2006
Periodicity of the LFS statistics (monthly, quarterly, annual)	<b>Annual</b>
Periodicity of the NUTS-3 statistics	NA
Persons who have filled the present report	Liliane Reichmann

**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 14%.
Size of the sample	The sample size is 25,600 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 6400 households, which belonged to the previous sample, are incorporated in the sample of 2006

Brief description of the method of calculating the weights	Post-stratification at one level was performed by sex, age-group and nationality
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+)?	The following age classes are used: 0-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-59, 60-64, 65+
Which regional breakdown is used in the weighting (e.g. NUTS 3)?	NA
Other weighting dimensions	NA

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
<b>Publication thresholds, annual estimates (wave approach) if different</b>	
Limit, below which figures cannot be published	

Limit, below which figures must be published with warning

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**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

**Table 1.1a Item non-response - Quarterly data**

*Compared to the variables defined by the Commission Regulation (EC) No 430/2005*

<i>Variable status</i>	<i>Column</i>	<i>Identifier</i>	<i>Quarter 1</i>	<i>Quarter 2</i>	<i>Quarter 3</i>	<i>Quarter 4</i>	<i>Short comments on reasons for non-available statistics and prospects for future solutions</i>
compulsory	Col_069/70	HOURREAS	14.1	14.1	14.1	14.1	?
	Col_201	INTWAVE	100.0	100.0	100.0	100.0	there is only one wave

**Table 1.1b Item non-response - Annual data**

*Compared to the variables defined by the Commission Regulation (EC) No 430/2005*

<i>Variable status</i>	<i>Column</i>	<i>Identifier</i>	<i>2006</i>	<i>Short comments on reasons for non-available statistics and prospects for future solutions</i>
compulsory	Col_118 - Not employed	AVAIREAS	20.0	<i>small size of respondants</i>
optional	Col_154/161	INCMONOR	53.5	<i>many people don't want to give an answer</i>

**Table 1.2.1 Classification and description of users**

User	Classification of user	Description of user
1	Institutions:	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	Social actors:	Employers associations, trade unions, lobbies, at the European, national or regional level
3	Media	International, national or regional specialised or for general public, interested both in figures and analyses/comments
4	Researchers, students	Universities, institutes, research centres
5	Enterprises:	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
1,2,3,4,5	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
1,2,3,4,5	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					
2					
3					
4					
Annual					

Reference on software used :	
Reference on method of estimation:	

**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*

<i>Brief comments on the main problems of frame quality</i>		Some households of the sampling frame RGPP were out of scope. They were deleted both from the sample and the sampling frame.
<i>Rate of under-coverage</i>	NA	
<i>Rate of over-coverage</i>	NA	
<i>Rate of classification errors</i>	NA	
<i>Reference on frame errors</i>		NA

**Table 2.2.2.a Errors due to the reporting units and the interviewers**

Give brief comments on the assessment of errors due to:	Reporting unit	NA
	Interviewers	NA

**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?**

Main references	N
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**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 per quarter**

Average number of interviewers per quarter	4
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**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)	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)	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)	Error rate in %	Comments
Y	0%	Corrections, if needed, are made before data release

**Table 2.2.4.a Calculation of non-response. Annual average**

Is the non response rate weighted? (Y/N)	N	If weighted, state the definition of the weights	
Is the non-response on household level or person level? (H/P)	H		

**Table 2.2.4.b Rates of non response. Annual average**

Wave	Non response rate in %
1	68%
2	
3	
4	
5	
6	
7	
8	

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

Quarter	Non response rate (%)	Refusals (%)	Non-contacts (%)	Other reasons(%)
yearly	68	15	13	40

**Table 2.2.4.f Patterns of non response. Underestimation bias**

There is a tendency to underestimate the main characteristics (Y/N/?)	NA	If Y give the characteristics	
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**Table 2.2.4.g Patterns of non response. Overestimation bias**

There is a tendency to overestimate the main characteristics (Y/N/?)	NA	If Y give the characteristics	
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**Table 2.2.4.h Methods used for adjustments for statistical unit non-response**

information or stratification is used	
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**Table 2.2.4.i Methods used for adjustments for statistical item non-response**

Add rows as necessary.

Characteristic	Rate of item non-response	Describe method used, mentioning which auxiliary information or stratification is used

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

	References
	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**



## 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	Date of national publication
1	4th week in January	middle of June	Only yearly results are published
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	
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	
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>

**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>

**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>

#### ***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 Change in 2006 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	Description of the impact of the changes on the statistics.	Estimation of effect for aggregates (%)	Estimation of adjustment F/P for aggregate	Are statistics revised backwards (Y/N)	If statistics are revised, give brief comment on the method of revision
N					

**Table 5.1.b 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	Description of the impact of the changes on the statistics.	Estimation of effect for aggregates (%)	Estimation of adjustment F/P for aggregate	Are statistics revised backwards (Y/N)	If statistics are revised, give brief comment on the method of revision
N					

**Table 5.2 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	Give a description of difference and provide an assessment of the impact of the divergence on the statistics
<i>N</i>	

**Table 5.3.a Improvements in 2006 that have been made on the questionnaire so that it complies with the Twelve Principles.**

*Add rows as necessary.*

<i>Principle</i>	<i>Description of improvement</i>

**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.*

<i>Variable</i>	<i>Description of improvement</i>

**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.*

<i>Concept</i>	<i>Description of improvement</i>

**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**

	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	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.).		NA	
Total employment by NACE			NA	
Number of hours worked			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 9738</p> <p>Registered (annual average) 9487</p>
Men under 25 years	1366 LFS
Men 25 years and over	2718 LFS
Women under 25 years	994 LFS
Women 25 years and over	4660 LFS
Regional distribution (NUTS-3)	NA

## 8.1 Cost

**Table 8.1a Number of staff involved**

	<i>Full-time equivalents</i>
Total	3
- of which professional and managerial	1

**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 quest.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	8061		
Persons interviewed over the year	21270		
Persons interviewed for the ad hoc module over the year	3480		