

# **Quality Report of the European Union Labour Force Survey 2005**

2007 edition



# How to obtain EU publications

Our priced publications are available from EU Bookshop (http://bookshop.europa.eu), where you can place an order with the sales agent of your choice.

The Publications Office has a worldwide network of sales agents. You can obtain their contact details by sending a fax to (352) 29 29-42758.

Europe Direct is a service to help you find answers to your questions about the European Union

Freephone number (\*):

00 800 6 7 8 9 10 11

(\*) Certain mobile telephone operators do not allow access to 00 800 numbers or these calls may be billed.

More information on the European Union is available on the Internet (http://europa.eu).

Luxembourg: Office for Official Publications of the European Communities, 2007

ISBN 978-92-79-04747-3 ISSN 1977-0375 Cat. No. KS-RA-07-017-EN-N

Theme: Population and social conditions
Collection: Methodologies and working papers

© European Communities, 2007

Eurostat is the Statistical Office of the European Communities. Its mission is to provide the European Union with high-quality statistical information. For that purpose, it gathers and analyses figures from the national statistical offices across Europe and provides comparable and harmonised data for the European Union to use in the definition, implementation and analysis of Community policies. Its statistical products and services are also of great value to Europe's business community, professional organisations, academics, librarians, NGOs, the media and citizens.

Eurostat's publications programme consists of several collections:

- **News releases** provide recent information on the Euro-Indicators and on social, economic, regional, agricultural or environmental topics.
- Statistical books are larger A4 publications with statistical data and analysis.
- **Pocketbooks** are free of charge publications aiming to give users a set of basic figures on a specific topic.
- Statistics in focus provides updated summaries of the main results of surveys, studies and statistical analysis.
- Data in focus present the most recent statistics with methodological notes.
- **Methodologies and working papers** are technical publications for statistical experts working in a particular field.

Eurostat publications can be ordered via the EU Bookshop at http://bookshop.europa.eu.

All publications are also downloadable free of charge in PDF format from the Eurostat website http://ec.europa.eu/eurostat. Furthermore, Eurostat's databases are freely available there, as are tables with the most frequently used and demanded shortand long-term indicators.

Eurostat has set up with the members of the 'European statistical system' (ESS) a network of user support centres which exist in nearly all Member States as well as in some EFTA countries. Their mission is to provide help and guidance to Internet users of European statistical data. Contact details for this support network can be found on Eurostat Internet site.

# **Table of Contents**

1	INTR	ODUCTION	3
2	REVI	EW OF DESIGNS AND METHODS OF THE EU-LFS IN 2005	3
	2.1	Coverage	3
	2.2	Legal basis	
	2.3	Compulsory participation	5
	2.4	Reference week	5
	2.5	Periodicity of the results	
	2.6	Sampling designs	
	2.7	Rotation schemes	<i>c</i>
	2.8	Calculation of the weighting factors	7
	2.9	Data collection methods	δ
	2.10	The cost and burden of the EU-LFS	δ
3	RELE	EVANCE	8
	3.1	The Users	8
	3.2	Completeness	9
4	ACCU	JRACY	11
	4.1	Sampling errors	
	4.2	Non-sampling errors	
5	TIME	LINESS AND PUNCTUALITY	18
6	ACCI	ESSIBILITY AND CLARITY	19
7	COM	PARABILITY	19
	7.1	Comparability over time	20
	7.2	Comparability over space	21
8	СОНІ	ERENCE	22
	8.1	Coherence with population statistics	
	8.2	Coherence with other employment estimates	
9	REGI	ONAL UNEMPLOYMENT	25
	9.1	Introduction	
	9.2	Sources for NUTS-III compilation of unemployment	
	9.3	Coefficient of variation at NUTS-II and NUTS-III for the rate of unemployment	

#### 1 Introduction

The present report is a Quality Report on the European Union Labour Force Survey (EU-LFS) for the year 2005.

The quality concept applied in this report is in conformance with the definition developed by Eurostat. In this definition quality consists of six components: relevance, accuracy, timeliness and punctuality, accessibility and clarity, comparability and coherence. Each quality component consists also of several sub-components. Each of the quality components is explained shortly at the start of each section in the following report.<sup>1</sup>

The individual country quality reports that were delivered to Eurostat during spring and summer 2006 constitute the main source for the present report. By 1 July 2006 twenty-six countries out of thirty-two had delivered such a report. Other sources that have been used or consulted are meta-data information collected by Eurostat, national quality reports from 2001, 2002, 2003 and 2004, websites of the individual countries, the LFS datasets for 2005 and the documentation of the public free data set maintained by Eurostat.

The present quality report follows closely the standard Quality Report form that has been developed within Eurostat and adapted to the Labour Force Survey by a special Task Force in 2000. In many instances, however, it is impossible to present the data exactly as prescribed by the form as it is often geared to homogeneous production processes within each country, rather than the special operation of Eurostat, collecting national data. In some cases the information from the individual countries was too scant to provide an exact summary.

The quality reports provide information on the regional aspects of the labour force statistics, as the reporting of quality has become the joint effort of the units within Eurostat dealing with labour force surveys and with regional employment and unemployment. The last section of the present report covers the regional aspects.

This quality report complements a previously published methodological working paper, describing the characteristics of the national surveys in 2004 in the Member States, Candidate Countries and the EFTA countries, also available on the Eurostat website. Also complementing this report is the "Reconciliation between work and family life. Final report to the 2005 LFS ad hoc module".

Eurostat wishes to thank the many experts in the Participating Countries providing the data and descriptions necessary for this report.

# 2 Review of designs and methods of the EU-LFS in 2005

#### 2.1 Coverage

The EU-LFS in 2005 covers the then 25 Member States of the European Union. In addition the survey covers the countries of the EEA, Iceland and Norway, Switzerland by bilateral agreement, as well as the Candidate Countries, Bulgaria, Croatia, Romania and Turkey. Except when indicated otherwise,

Most of the introductory texts shortly explaining each quality component are taken from the "Standard Quality Report" (Doc. Eurostat/A4/Quality/03/General/Standard Report), available on request.

the discussion below refers to these 32 countries, which are treaty bound to provide Eurostat with micro-data from their labour force surveys.<sup>2</sup>

All the territories of Participating Countries are covered, except for Cyprus which only covers the areas under the control of the government of the Republic of Cyprus.

The EU-LFS covers persons in private households, but in several countries members of collective households are either sampled directly (register based sampling frames) or indirectly through their relationship with the sampled household.

Regardless of the sampling method or which age groups are interviewed, the data records at Eurostat represent all age groups, with the exception of the EFTA countries (Iceland, Norway and Switzerland), which only provide data for the interviewed age groups.

# 2.2 Legal basis

The EU-LFS is regulated by several regulations of the Council, European Parliament and the Commission. The most important regulations are listed in table 2.1. In addition, several Participating Countries have their own national legislation for the conducting of a labour force survey. Information on the national laws or regulations is not available.

Table 2.1 Major regulations of the EU- LFS relating to 2005 data collection

General regulations	Comments
Council Regulation (EC) No 577/98 of 9 March 1998 on the organisation of a labour force sample survey in the Community (OJ No L 77/3).	This is the main regulation with provisions on design, survey characteristics and decision making processes.
Regulation (EC) No 1991/2002 of the European Parliament and of the Council of 8 October 2002 amending Council Regulation (EC) No 577/98 on the organisation of a labour force sample survey in the Community (OJ No L 308/1).	This regulation puts a time limit on the adoption of the continuous LFS.
Implementation regulations	
Commission Regulation (EC) No 1575/2000 of 19 July 2000 implementing Council Regulation (EC) N° 577/98 on the organisation of a labour force sample survey in the Community concerning the codification to be used for data transmission from 2001 onwards (OJ No L 181/16).	There are two corrigenda to this regulation (OJ L272/47 and OJ L53/30)
Commission Regulation (EC) No 1897/2000 of 7 September 2000 implementing Council Regulation (EC) No 577/98 on the organisation of a labour force sample survey in the Community concerning the operational definition of unemployment (OJ No L 228/18).	This regulation also contains the 12 principles for constructing the national questionnaire
Commission Regulation (EC) No 2104/2002 of 28 November 2002 adapting Council Regulation (EC) No 577/98 on the organisation of a labour force sample survey in the Community and Commission Regulation (EC) No 1575/2000 implementing Council Regulation (EC) No 577/98 as far as the list of education and training variables and their codification to be used for data transmission from 2003 onwards are concerned (OJ No L 324/14).	Replaces the education module in Council Regulation (EC) No 577/98 and provides implementation codes.

Due to national legislative reasons Turkey has been unable to comply with this requirement before 2006.

# 2.3 Compulsory participation

The participation in the EU-LFS is compulsory in thirteen Participating Countries (Belgium, Germany, Greece, Spain, France, Italy, Cyprus, Malta, Austria, Portugal, Slovakia, Turkey and Norway), but voluntary in 19 countries.

#### 2.4 Reference week

The reference week starts on Monday and ends on Sunday. The first week of the year or quarter is the week that includes the first Thursday of the year or the quarter. The first week in 2005 started on Monday 3 January 2005 except in Hungary, Ireland and the United Kingdom. Ireland and the United Kingdom provide data for the seasonal quarters. In those two countries the year 2005 started in the 49<sup>th</sup> week of the year 2004. Ireland, however, did not provide any data for the 53<sup>rd</sup> week of the year 2004. In Hungary the first reference week in 2005 started on Monday 10 January.

In all countries but Hungary (3 weeks/month), Bulgaria, Croatia and Turkey the sample is spread over the 13 weeks of the quarter. The sample is uniformly spread over the weeks, except in Luxembourg, Slovenia, Romania and Switzerland. In Germany, Greece, Cyprus and the Netherlands the spread is roughly uniform.

# 2.5 Periodicity of the results

With the exception of Luxembourg, Croatia and Switzerland, the EU-LFS in 2005 produces quarterly estimates. Luxembourg, even if implementing a survey covering all weeks of the year in 2005, is only able to provide annual estimates. Croatia provides estimates referring to each half-year. Switzerland only provides estimates relating to the second quarter of the year.

# 2.6 Sampling designs

The sampling designs in the EU-LFS are extremely varied. Most NSIs use some kind of multi-staged stratified random sample design, especially those that do not have central population registers available.

#### Base used for the sample

Population registers and the latest Population Census or list of address used in that Census are the two main sources for the sampling frame. Other sources include lists of addresses from, e.g., the Postal Authorities or Utility databases. The Nordic countries as well as Belgium, Italy, Lithuania and Slovenia use the Population Registers as the sole basis while the Netherlands complete this information with postal data respectively. Germany base the sample frame on the 1987 Census in the western part and the Central Population Register in the east, both updated by the Register of new dwellings.

# Sampling stages and primary sampling units (PSU)

Denmark, Germany, Luxembourg, Malta, Austria, Finland, Sweden, the United Kingdom, Iceland and Norway use a single stage sampling design. In Estonia, Lithuania and Slovenia all members of the

household of the selected individual are selected into the final sample.<sup>3</sup> All other countries use a two or three stage sampling design, usually selecting administrative districts or census enumeration areas in the first stage.<sup>4</sup>

#### Ultimate sampling units

Three types of ultimate sampling units are employed: 1) households, 2) dwellings/addresses and 3) persons. In addition, Norway selects family units<sup>5</sup> in order to achieve a sample of persons. Germany, Ireland, Portugal and Romania sample clusters of dwelling units. In samples of dwellings or addresses, usually all the persons and thus all the household units residing within the dwelling/address are interviewed (Czech Republic, Germany, Spain, France, Cyprus, Hungary, Austria, Poland, Portugal, Slovakia, Romania, United Kingdom and Turkey). The exception is the Netherlands, where a final sampling stage is implemented, i.e. sub-sampling households from multi-household mailing addresses. When persons constitute the primary sampling units, the selected persons constitute either the final sample (the Nordic countries and Switzerland) or the sampled persons lead to a final sample comprised of the sampling units and their household members (Estonia, Lithuania and Slovenia).

# Overall sampling rate

The overall sampling rate per quarter (ultimate sampling units) of the EU-LFS is 0.43% (EU-25: 0.42%). Ireland has by far the highest sampling rate per quarter (3.3%), followed Luxembourg (2.8%), Malta (2%) and Iceland (1.9%), while other Participating Countries have sampling rates of 1.5% or less. The achieved sample in the second quarter of 2005 was 1.710 million individuals (EU-25: 1.508 million), of which 1.335 million were in the age group 15-74 years (EU-25: 1.168 million). The achieved sample in the EU-LFS is thus approximately ½ of a percentage of the total population.

#### Stratification

All the countries, except Lithuania, Malta and Iceland, stratify the sample frame prior to the sampling. Region, either NUTS II, NUTS III, NUTS IV regions, or nationally defined areas, is the most common stratification variable (all but Denmark). Urbanisation is also a popular stratification variable (Greece, France, Spain, Ireland, Cyprus, Latvia, Lithuania, Poland, Slovenia, Bulgaria and Romania). Other stratification variables include register status of individuals in employment/unemployment registers (Denmark, Sweden) and auxiliary information about the characteristics (size, type) of the primary sampling units (Spain, France, Italy, Hungary).

#### 2.7 Rotation schemes

All the Participating Countries but Croatia use a rotating panel design for the samples. The number of panels (/waves) range from two to eight. Panel designs with four and five panels are the most common. Each panel is either interviewed once in each quarter successively without interruption, or the panel may skip over one or more quarters before being interviewed again. Depending on the

The sampling design in Lithuania and Slovenia is equivalent to a single stage cluster sampling with selection probabilities proportional to size with replacement. As the clusters cannot be identified in the sampling frame, the design can also be described as a "particular case of 'network sampling'" (Särndal, Swensson and Wretman (1992) *Model Assisted Survey Sampling*. New York. Springer-Verlag, p. 13).

Ireland is a special case, using a two-stage cluster design. However, theirs is a Master Sample design: the second stage is the allocation of the dwelling units within each PSU over time, so that eventually all of the sub-units within each selected PSU are covered (or would be if the sample was not revised every five years based on the five-year Census of Population) – each PSU divided randomly into 5 clusters of 15 dwelling units, each cluster participating 5 times before being replaced by the next cluster. The third stage in the Portuguese sampling design is similar except that the secondary sampling units (secções) are divided into 6 clusters of 50 dwelling units, each participating 6 times before being replaced by the next cluster.

<sup>&</sup>lt;sup>5</sup> Person + spouse or registered partner + dependent children.

national priorities with regard to desired precision of change estimates, levels or annual averages, the number of waves and skip patterns lead to different outcomes of overlaps between two successive quarters or between the same quarters in two successive years.

Of the 29 countries producing quarterly results, all but three design the panel rotation so that up to 50% of the samples overlap between two successive quarters (Denmark 33% and Germany and Latvia 0%). Belgium uses a two-panel design, but the EU-LFS data only refer to the first panel interviewed for the first time. There is less emphasis on overlap between quarters in two successive years. Two countries out of 32 have no overlap, while 18 countries have an overlap ranging from 33% to 50%. Germany has 75% overlap with the previous year and Switzerland 70%. Luxembourg retained 6 401 households from the 2004 sample for interviewing in 2005.

# 2.8 Calculation of the weighting factors

The Council Regulation (EC) No 577/98 on the EU-LFS stipulates that weighting factors should take into account "in particular the probability of selection and external data relating to the distribution of the population being surveyed, by sex, age (five-year age groups) and region (NUTS II level), where such external data are held to be sufficiently reliable by the Member States concerned" (Article 3(5)).

The methods of calculating the weights differ considerably between countries. Two main methods are used, depending on the detail of the external information and whether or not this external information can be cross-tabulated: 1) inverse of the selection probabilities adjusted *a posteriori* to the population's distribution by sex, age groups and other external (administrative) sources, and 2) different variations of adjusting to marginal totals, including generalised calibration and generalised regression. Most of the countries adjust for non-response either directly in the weighting process or in a preliminary step before adjusting the weights to external sources.

Due to the complexity and number of factors taken into account in some of the weighting calculations, the stipulation of the Regulation to use five-year age groups are not implemented in all of the countries. Almost all countries adjust the weighting factors to regional levels. These regions may, however, not necessarily correspond to the NUTS II regional classification.

All the countries with the exception of Croatia use data on sex in the weighting process. Croatia does not use age in calculating the weighting factors while six countries (Bulgaria, Germany, Luxembourg, Hungary, Malta and Slovenia) use broader age groups than five-year. All the countries that have NUTS II regions defined, except France, use at least NUTS II regions for calculating the weights, but sixteen countries (Bulgaria, the Czech Republic, Estonia, Greece, Spain, Ireland, Italy, Latvia, Lithuania, Hungary, Malta, Slovakia, Slovenia, Finland, Sweden and Norway) have a more detailed regional classification (NUTS III or NUTS IV).

Denmark, Lithuania, Finland, Sweden and Norway use register statistics on employment/unemployment directly for weighting. In other countries, different external distributions or sources are frequently used both for weighting and stratification, such as urban/rural distinction, nationality, ethnicity, and size classes of regions or local areas.

All the countries, who only sample non-institutional households, gross the sample to the non-institutional population with the exception of Belgium, Bulgaria and Slovenia who gross to the total population.

These percentages are only theoretical, the actual overlaps are lower due to non-response and panel mortality.

#### 2.9 Data collection methods

Three modes of data collection exist for the EU-LFS, personal visits, telephone interviews and self-administered questionnaires. Half of the Participating Countries mix the two first so that the first wave is always via personal visit while subsequent waves are interviewed with telephone if available. Germany collects data with a mix of self-filled questionnaires and face-to-face interviews. Denmark collects data with telephone interviews but persons who could not be reached by telephone receive a mailed questionnaire for completing. Belgium sends questionnaires by post in the second (last) interview and calls by phone if there is no return after two weeks. Five countries (Luxembourg, Finland, Sweden, Iceland and Switzerland) rely solely on telephone interviews. Eight countries (Bulgaria, Estonia, Ireland, Latvia, Portugal, Romania, Croatia and Turkey) collect data using only face-to-face interviews

Nineteen of the countries conduct the interview only with computerised questionnaires. Other three use both computerised and paper questionnaires. The rest rely solely paper questionnaires.

#### 2.10 The cost and burden of the EU-LFS

Of the 31 countries submitting a quality report only 14 reported the total cost of the survey. Weighting by the number of interviews over the year by country and extrapolating from the reported cost, the 31 countries can be expected to have spent 20.06 Euros pr interview in the year 2005 or 112 million Euros in total.<sup>7</sup>

Twenty-three countries gave some information on how long the interview lasted per person or household. For these countries the interview in the first wave lasted on the average 14:49 minutes. Subsequent waves, on the other hand, took on the average 10:43 minutes to complete.

#### 3 Relevance

Relevance is the degree to which statistics meet current and potential users' needs. It refers to whether all statistics that are needed are produced and the extent to which concepts used (definitions, classifications etc.) reflect user needs. It can be assessed by analysing the different users, who they are, what needs they have, are they satisfied etc.

Given that most EU statistics are compiled according to predefined regulations containing a defined list of variables the relevance can also be assessed by examining the completeness of the statistics measured against the relevant regulation.

#### 3.1 The Users

Eurostat does not carry out any satisfaction survey targeted at users of labour markets statistics. The relevance of the LFS statistics for the users can thus only be assessed by indirect means. These requests are subject to scrutiny by the national experts and representatives of the NSIs. For major topics of interest, the instrument of ad hoc modules has proven to be useful and flexible. For users other than the Commission, anecdotal evidence for relevance can be found in positive feedbacks from individual users, or even in the absence of complaint.

In 2004 the cost per interview was 20.39 Euros. This estimate is hopefully more robust than what was published in the Summary Quality Report 2004, which used a simple correlation between number of interviews and total costs pr year in country. In the new estimate, account is taken of interview mode, household visitations and whether or not a country is a New Member State or Candidate Country or not).

The main institutional users, however, are known to the unit F2 Labour Market Statistics. Many of them are frequently consulted on various aspects of development and dissemination of labour force statistics.

Table 3.1 Classification and description of users

Users	Description of user	Needs In term of concepts/statistics
DG Employment	The policy arm of the Commission regarding the labour market	Measurement and monitoring of policy agenda, especially the Lisbon and Stockholm targets
Other Directorates of the Commission	Policy setting	Various, especially in the domains of economic, education and social policy
ECB	The European Central Bank	Short term statistics relating to Euro area
ESTAT - Unit D2	Regional indicators and geographical information	Detailed regional statistics, structural funds
ESTAT - Unit C2	National accounts - production	Accurate estimates of labour input, using both the national and domestic concept
ESTAT - Unit F4	Education, science and culture statistics	Estimates on current education and education levels, higher education and research
Other registered users of the web-data	Including NSIs, international organisations	International comparison of main indicators
The public	Researchers, news agencies and other	Varied, mainly intra EU comparisons

# 3.2 Completeness

When the Council Regulation on the continuous EU-LFS<sup>8</sup> was launched in 1998 it was anticipated that the transition to the new structure of a continuous survey providing quarterly results would be uneven for the different Participating Countries. In 2002, however, the Council and Parliament put an end to the transitional period, not allowing it to extend beyond 2002, or by way of derogation beyond 2003 for Italy and 2004 for Germany. Consequently, 2005 is the first year with all Member States of the EU conducting a continuous survey. Of countries outside the EU-25 Switzerland conducted a labour force survey only in the spring of 2005, and Croatia carried out a semi-annual but not a continuous survey. For legal reasons Turkey has been unable to provide Eurostat with labour force survey micro data until 2006.

Even if otherwise adhering to the EU-regulations on the EU-LFS, countries do not always provide data for all the variables. This can be for various reasons, such as assessment that the variable in question is irrelevant to the labour market situation in the country or (temporary) inability to implement the variable in the national questionnaire. Some NSIs implement the full set of questions only in the spring or to a certain survey wave.

Country by country and variable by variable analysis of the (in)completeness is provided in Annex 1. Tables 3.2 and 3.3 summarise the completeness data.

-

<sup>8</sup> Council Regulation (EC) No 577/98.

Table 3.2 Completeness of the EU-LFS variables, 2005

Number of compulsory variables with 100%

item non-response <sup>1</sup>	Number of countries	EU-25
0	10	10
1-4	11	10
5-9	4	3
10-19	6	2
Total	31	25

<sup>&</sup>lt;sup>1</sup> Not including variables that are empty because the filtering variable excluded any response.

Table 3.3 Compulsory EU-LFS variables having one or more country returning 100% non-response or constant value  $^{\rm 1}$  , 2005

Colui		Brief description	Number of countries	EU-25
1	/2	Sequence number in the household	4	3
	3	Relationship to reference person in the household	5	2
4	1/5	Sequence number of spouse or cohabiting partner	3	1
6	6/7	Sequence number of father	3	1
8	3/9	Sequence number of mother	3	1
17	7/18	Nationality	1	1
19	9/20	Years of residence in this Member State	2	-
34	1/35	Number of persons working at the local unit	2	2
36	6/37	Country of place of work	4	3
38	3/39	Region of place of work	8	6
40	)/43	Year in which person started working for this employer or as self-employed	1	•
4	46	Full-time/part-time distinction	1	1
4	48	Total duration of temporary job or work contract of limited duration	2	1
53	3/54	Main reason for hours actually worked during the reference week being different from the person's usual hours	1	
5	55	Wish to work more than the current number of hours	1	1
56	6/57	Number of hours that the person would like to work in total	1	1
5	58	Working at home	6	3
5	59	Looking for another job and reasons for doing so	1	
6	31	Professional status (in the second job)	1	
62	2/63	Economic activity of local unit (in the second job)	2	2
6	66	Existence of previous employment experience	1	
7	73	Main reason for leaving last job or business	1	1
7	74	Professional status in last job	1	1
77	7/79	Occupation of last job	1	1
	82a	Type of employment sought (non-employed)	2	1
on-	83a	Duration of search for employment (non-employed)	1	1
ie n	85a	Contacted private employment agency to find work (non-employed)	2	1
of th	88a	Inserted or answered advertisements in newspapers or journals (non-employed)	1	-
Job search activities of the non- employed	90a	Took a test, interview or examination (non-employed)	3	1
activities employed	91a	Looked for land, premises or equipment (non-employed)	6	5
ı aci em	92a	Looked for permits, licences, financial resources (non-employed)	7	5
arch	93a	Awaiting the results of an application for a job (non-employed)	5	4
ses	94a	Waiting for a call from a public employment office (non-employed)	9	5
Job	95a	Awaiting the results of a competition for recruitment to the public sector (non-employed)	16	11
	96a	Other method used (non-employed)	4	4
viti	82b	Type of employment sought (employed)	4	1

Table 3.3 Compulsory EU-LFS variables having one or more country returning 100% non-response or constant value<sup>1</sup>, 2005

Column number	Brief description	Number of countries	EU-25
83b	Duration of search for employment (employed)	6	2
84b	Contacted public employment to find work (employed)	5	2
85b	Contacted private employment agency to find work (employed)	7	4
86b	Applied to employers directly (employed)	3	1
87b	Asked friends, relatives, trade unions etc. (employed)	4	1
88b	Inserted or answered advertisements in newspapers or journals (employed)	4	1
89b	Studied advertisements in newspapers or journals (employed)	3	1
90b	Took a test, interview or examination (employed)	7	3
91b	Looked for land, premises or equipment (employed)	10	6
92b	Looked for permits, licences, financial resources (employed)	11	6
93b	Awaiting the results of an application for a job (employed)	9	5
94b	Waiting for a call from a public employment office (employed)	13	8
95b	Awaiting the results of a competition for recruitment to the public sector (employed)	18	12
96b	Other method used (employed)	7	3
98b	Availability to start working within two weeks (employed)	6	3
99	Situation immediately before person started to seek employment (or was waiting for new job to start)	4	3
100	Registration at a public employment office	3	2
116	Situation with regard to activity one year before survey	4	3
117	Professional status one year before survey	1	•
118/119	Economic activity of local unit in which person was working one year before survey	1	
120/121	Country of residence one year before survey	6	2
122/123	Region of residence (within Member State) one year before survey	6	2
170/171	Interview week	1	•
174/175	Region of household	1	•
176	Degree of urbanisation	6	2
203	Sequence number of the survey wave	4	3
294	Level of this education or training	3	1
299/301	Number of hours spent on all taught learning activities within the last 4 weeks	2	1
309/311	Field of highest level of education or training successfully completed	2	2
312/315	Year when highest level of education was successfully completed	2	1

<sup>&</sup>lt;sup>1</sup> Excluding variables which are constant by default such as country, reference year, region (if NUTS2 is the whole country)

# 4 Accuracy

Accuracy in the general statistical sense denotes the closeness of computations or estimates to the exact or true values. Statistics can be different from the true values because of variability (the statistics change from implementation to implementation of the survey due to random effects) and/or bias (the average of the possible values of the statistics from implementation to implementation is not equal to the true value due to systematic effects).

Several types of error, stemming from all survey processes, comprise the error of the statistics (their bias and variability). A certain typology of errors has nowadays been adopted in statistics. **Sampling errors** affect only sample surveys; they are simply due to the fact that only a subset of the population, usually randomly selected, is enumerated. **Non-sampling** errors affect sample surveys and complete enumerations alike and comprise:

#### 1. Coverage errors;

- 2. Measurement errors;
- 3. Processing errors;
- 4. Non response errors; and
- 5. Model assumption errors.

# 4.1 Sampling errors

**Sampling errors** affect only sample surveys and arise from the fact that not all units of the frame population are enumerated. The statistics produced from a sample survey will differ from the values which would be computed if exactly the same survey operations were applied to the whole frame population.

The Participating Countries provide Eurostat with an estimate of the relative standard error of five main characteristics. These relative standard errors can also be expressed as confidence limits, i.e. the range of values that in 19 out 20 times would capture the true value in the population. It is also relatively straightforward to provide similar statistics on the aggregate level.

Table 4.1 provides the estimates and confidence limits for the 2<sup>nd</sup> quarter 2005, while table 4.2 provides estimates and confidence limits for the annual averages for 2005.

Table 4.1 Confidence limits<sup>1</sup>, 2<sup>nd</sup> quarter 2005

	Number of employed	Number of part-time employed	Number of unemployed	Rate of unemployment	Average number of hours actually worked
Country	x1000	x1000	x1000	%	hrs
EU-25	197 050 ±470	36 124 ±256	19 384 ±224	9.0 ±0.1	37.9 ±0.1
EU-15	167 711 ±369	33 818 ±242	14 798 ±185	8.1 ±0.1	37.2 ±0.1
EA-12	132 542 ±343	24 955 ±215	12 919 ±176	8.9 ±0.1	37.6 ±0.1
EEA	199 493 ±470	36 806 ±256	19 499 ±224	8.9 ±0.1	37.8 ±0.1
BE	4 212 ± 57	922 ± 39	370 ± 30	8.1 ±0.7	37.1 ±0.4
BG	3 009 ± 73	71 ± 9	333 ± 25	10.0 ±0.7	40.4 ±0.2
CZ	4 751 ± 41	228 ± 13	402 ± 18	7.8 ±0.4	42.8 ±0.1
DK	2 738 ± 32	601 ± 28	138 ± 14	4.8 ±0.5	35.6 ±0.3
DE	36 195 ±206	8 741 ±122	4 613 ±109	11.3 ±0.3	37.0 ±0.2
EE	609 ± 26	47 ± 10	54 ± 10	8.2 ±1.5	40.4 ±0.6
IE	1 929 ± 17	-	85 ± 5	4.2 ±0.3	37.3 ±0.2
EL	4 382 ± 48	211 ± 15	467 ± 21	9.6 ±0.4	42.4 ±0.2
ES	18 895 ±107	2 418 ± 68	1 945 ± 59	9.3 ±0.3	39.6 ±0.1
FR	24 611 ±188	4 281 ±119	2 315 ± 96	8.6 ±0.4	37.1 ±0.2
IT	22 651 ±120	2 896 ± 72	1 837 ± 60	7.5 ±0.2	38.6 ±0.1
CY	348 ± 9	31 ± 3	20 ± 3	5.4 ±0.7	39.4 ±0.4
LV	1 028 ± 26	99 ± 18	104 ± 14	9.2 ±1.1	41.9 ±0.6
LT	1 473 ± 43	96 ± 13	137 ± 14	8.5 ±0.9	39.5 ±0.3
LU	194 ± 4	34 ± 2	9 ± 1	4.5 ±0.6	38.1 ±0.3
HU	3 891 ± 64	170 ± 12	298 ± 18	7.1 ±0.4	40.6 ±0.1
MT	148 ± 5	14 ± 2	13 ± 2	7.8 ±1.1	38.7 ±0.7
NL	8 113 ± 60	$3747 \pm 64$	410 ± 20	4.8 ±0.3	31.4 ±0.2
AT	3 803 ± 37	785 ± 22	211 ± 15	5.3 ±0.4	39.1 ±0.3
PL	13 947 ±273	1 484 ± 76	3 072 ±120	18.1 ±0.6	41.7 ±0.2
PT	5 132 ± 50	590 ± 34	399 ± 27	7.2 ±0.5	39.0 ±0.2
RO	9 303 ±160	998 ± 99	718 ± 54	7.2 ±0.6	41.1 ±0.4
SI	947 ± 19	85 ± 6	58 ± 6	5.8 ±0.6	40.7 ±0.3
SK	2 196 ± 22	53 ± 6	429 ± 17	16.3 ±0.9	41.1 ±0.2

Table 4.1 Confidence limits<sup>1</sup>, 2<sup>nd</sup> quarter 2005

	Number of employed	Number of part-time employed	Number of unemployed		Rate of unemployment	Average number of hours actually worked
Country	x1000	x1000	x1000		%	hrs
FI	2 425 ± 16	330 ± 12	258 ±	10	9.6 ±0.3	37.6 ±0.2
SE	4 359 ± 21	1 058 ± 24	413 ±	15	8.7 ±0.3	36.0 ±0.2
UK	28 072 ±132	7 204 ±105	1 328 ±	52	4.5 ±0.2	35.7 ±0.2
HR	1 566 ± 53	158 ± 18	233 ±	18	13.0 ±0.9	40.0 ±0.4
IS	163 ± 2	32 ± 2	5 ±	1	2.9 ±0.7	43.1 ±0.6
NO	2 281 ± 14	650 ± 17	111 ±	8	4.6 ±0.3	34.7 ±0.3
CH	3 974 ± 28	1 316 ± 27	185 ±	10	4.5 ±0.2	37.7 ±0.2

<sup>&</sup>lt;sup>1</sup> The confidence limits at 95% level of significance.

Note: Estimates in italics are Eurostat's own approximation of the confidence limits.

Table 4.2 Confidence limits<sup>1</sup>, Annual average 2005

Tubic 4.1	Number of employed	Number of part-time employed	Number of unemployed	Rate of unemployment	Average number of hours actually worked
Country	× 1000	× 1000	× 1000	%	hrs
EU-25	197 467 ±353	35 983 ±187	19 514 ±157	9.0 ±0.07	37.8 ±0.04
EU-15	167 909 ±268	33 644 ±175	14 943 ±130	8.2 ±0.07	37.2 ±0.05
EA-12	132 633 ±242	24 839 ±146	13 053 ±121	9.0 ±0.08	37.5 ±0.05
EEA	199 909 ±354	36 662 ±188	19 623 ±157	8.9 ±0.07	37.8 ±0.04
BE	4 235 ± 30	932 ± 20	390 ± 16	8.4 ±0.3	37.0 ±0.3
BG	2 982 ± 56	60 ± 6	334 ± 19	10.1 ±0.5	40.7 ±0.1
CZ	4 764 ± 33	233 ± 10	410 ± 15	7.9 ±0.3	42.0 ±0.1
DK	2 752 ± 16	608 ± 14	140 ± 7	4.8 ±0.2	35.8 ±0.2
DE	36 353 ±104	8 732 ± 62	4 577 ± 55	11.2 ±0.1	37.1 ±0.1
EE	607 ± 18	47 ± 6	52 ± 6	7.9 ±0.9	40.3 ±0.3
IE	1 952 ± 14	0 ± 0	89 ± 5	4.3 ±0.2	37.7 ±0.2
EL	4 369 ± 43	217 ± 13	477 ± 19	9.9 ±0.4	42.4 ±0.2
ES	18 973 ± 63	2 347 ± 33	1 913 ± 34	9.2 ±0.1	39.0 ±0.1
FR	24 536 ±169	4 227 ±106	2 458 ± 88	9.1 ±0.3	37.0 ±0.2
IT	22 563 ± 79	2 897 ± 49	1889 ± 36	7.7 ±0.1	38.2 ±0.1
CY	348 ± 9	31 ± 3	19 ± 3	5.3 ±0.7	39.7 ±0.4
LV	1 034 ± 14	86 ± 8	101 ± 8	8.9 ±0.7	42.3 ±1.2
LT	1 474 ± 46	104 ± 14	133 ± 15	8.3 ±0.9	38.9 ±0.3
LU	194 ± 2	34 ± 1	9 ± 1	4.5 ±0.3	38.1 ±0.2
HU	3 901 ± 59	160 ± 10	302 ± 15	7.2 ±0.3	40.5 ±0.1
MT	149 ± 2	14 ± 1	12 ± 1	7.3 ±0.6	39.3 ±0.4
NL	8 111 ± 42	3 741 ± 32	402 ± 10	4.7 ±0.1	32.0 ±0.2
AT	3 824 ± 36	808 ± 19	208 ± 10	5.2 ±0.2	39.2 ±0.3
PL	14 116 ±213	1 521 ± 62	$3045 \pm 82$	17.8 ±0.4	41.2 ±0.2
PT	5 123 ± 50	576 ± 32	422 ± 22	7.6 ±0.4	39.1 ±0.2
RO	9 115 ±113	932 ± 68	$704 \pm 37$	7.2 ±0.4	40.5 ±0.2
SI	949 ± 9	86 ± 3	66 ± 3	6.5 ±0.3	40.7 ±0.2
SK	2 215 ± 16	56 ± 4	430 ± 13	16.3 ±0.6	41.1 ±0.2
FI	2 401 ± 16	330 ± 9	220 ± 7	8.4 ±0.3	37.4 ±0.1
SE	4 336 ± 19	1 049 ± 29	351 ± 9	7.5 ±0.2	36.2 ±0.2
UK	28 187 ±114	7 149 ± 90	1 399 ± 46	4.7 ±0.2	36.0 ±0.1
HR	1 573 ± 44	158 ± 15	227 ± 13	12.6 ±0.7	40.1 ±0.3
IS	160 ± 1	35 ± 1	4 ± 0	2.6 ±0.3	42.3 ±0.3
NO	2 283 ± 13	643 ± 15	105 ± 7	4.4 ±0.3	35.0 ±0.3
CH	3 974 ± 28	1 316 ± 27	185 ± 10	4.5 ±0.2	37.7 ±0.2

<sup>&</sup>lt;sup>1</sup> The confidence limits at 95% level of significance.

Note: Estimates in italics are Eurostat's own approximation of the confidence limits.

# 4.2 Non-sampling errors

#### Coverage errors

The *frame* is a device that permits access to population units, such as a list of households with addresses. *Frame population* is the set of population units which can be accessed through the frame and the survey's conclusions really apply to this population. **Coverage errors** (or frame errors) are due to divergences between the target population and the frame population.

Table 4.3 Frame quality, coverage rates and methodological notes

Country	Under- coverage	Over- coverage	Misclassifi cation	Comments
BE				
				The sample is planned and formed on lists of households obtained from March 2001 Population Census.
BG		8.3		During the survey field work problems are found on: - non-occupied houses or houses used for other purposes - one household (according to the Census list) divided into two or more separate households or the opposite.
CZ	-	-	-	The nonexistent or uninhabited flats/estates remain in the Register of Census Areas and cause overcoverage. On the other hand foreigners live predominantly in collective households and therefore data for this population based on the LFS are not representative.
DK	$\rightarrow$ 0	$\rightarrow$ 0	$\rightarrow$ 0	Statistics Denmark applies registers that are expected to have full coverage. In the Danish LFS the main sampling frame is the Population Register supplemented with the Unemployment Register for stratification purposes. The Population Register covers all registered residents in Denmark, and the register is currently updated on a quarterly basis. In terms of both coverage and updating, as such, this is a high quality sampling frame.  However, after selection the monthly LFS sub-samples are transmitted to the Central Office of Civil Registration (CPR) in order to both verify active status (alive and resident) and to add updated information on dwelling address. Recently the Law of CPR was revised giving everybody the potential right to refuse participation in statistical and scientific surveys. Residents who have used this right (mainly people who have recently changed their dwelling place) are guaranteed that they will not be contacted in relation to surveys, thus CPR is not allowed to transmit any information concerning their potential active status or dwelling address. Unfortunately, this results in problems of increasing refusal which is a disturbing trend.
DE				<u> </u>
EE	-	-	-	In 2005 6 708 households of 9 066 households sampled for the survey, were interviewed. Among the households not interviewed, in 109 cases (1.2% of total number of sampled households) the reason was an error or inaccuracy of the frame (person emigrated or left the county, person deceased, wrong address, etc).
IE	-	-	-	Our frame is the Census of population and as such we have no quality concerns regarding our frame.
EL				
ES				No significant problems
FR	-	-	-	-there is a risk of bias for the communities: persons living in community households are represented by persons living in private households and persons living in communities and attached to private households of the same age and gender, which is not a perfect hypothesis.  - there is a risk of double counting for students who live in independent housing. They can be counted once in the housing of their parents and once in their own housing. The risk of double counting could lead to an over-coverage of student.
IT		1.09	1.03	The families of the survey are extracted once a year from the municipalities' general registry offices. The data might contain errors as for information such as addresses, wrong inclusions and missed inclusions. Substitution with households having similar characteristics is allowed (up to 3 replacements). Under-coverage might be due to time lag in registering new residents and changes of residence in the registers of the resident population. It is believed that such effect has no much weight.
CY	2.00	-	-	In the first stage of the sample design a number of primary sampling units (PSUs) were drawn in 2005 from the Census of Population frame of 2001. In a post enumeration survey conducted after the census an undercoverage of 2,0% was estimated. The selected PSUs were again enumerated completely in 2005. In the 2nd stage of the sample design a number of households were selected from the updated PSUs. Updating to include newly constructed dwellings is carried out on an annual basis. Although the selected PSUs are completely updated annually, the original selection of PSUs was based on the distribution of households as

Table 4.3 Frame quality, coverage rates and methodological notes

Country	Under- coverage	Over- coverage	Misclassifi cation	Comments
				enumerated in the 2001 Census. This assumes that the development of the selected PSUs was the same as in the rest of the areas which were not selected and this might not be completely true.
LV	-	1.97	-	The shortcoming is that the number of households in counting areas has not been updated from year 2000.  In general the list of counting areas covers all territory of Latvia, but there could be some territories not covered by the list. It is due to active building of new dwellings in previously unoccupied areas during the last years.
LT	-	1.20	-	The main problem is that some persons don't live in Lithuania for a long time and still are in the Population register.
LU				
HU	-	-	-	Hard-to-access groups are characterised either by extremely bad traffic conditions to get to their place or by collective reluctance usually within a small community towards being interviewed. Though the effect of these factors cannot be estimated, it is supposed to be not significant.
MT	-	-	-	The sampling frame being used covers private households. Hence persons living in institutional households are not being covered.
NL	-	-	-	<u> </u>
AT	< 1.00	-	-	From 2004 onwards the sample for the Austrian LFS is drawn from the Austrian population register. This register was set up in 2002, still the composition of the households is not always recorded correctly. However as we are sampling households not persons this does not cause serious problems for the results of the survey. The sample is drawn three months before the start of the quarter. This results in a time lag of three to six months. Therefore dwellings where persons moved in after the due date for the survey are not covered.
PL				
PT	-	12.74	-	The sampling frame doesn't cover the individuals living in collective dwellings. This population represents less than approximately 1%.
RO	1.06	1.13	-	Under-coverage might be due to newly constructed dwellings after the 2002 Census. Also, the database might contain not-eligible dwellings.
SI		0.00		Register of private households would be better sampling frame, but we do not have it and we adjust data for unequal probability of selection of households
SK				
FI				
SE				
UK				
HR				
IS				No significant problems
NO				
СН				

#### Measurement errors

**Measurement errors** are errors that occur during data collection and cause the recorded values of variables to be different than the true ones. Their causes are commonly categorized as:

- survey instrument: the form, questionnaire or measuring device used for data collection may lead to the recording of wrong values.
- Respondent: respondents may, consciously or unconsciously, give erroneous data.
- Interviewer: interviewers may influence the answers given by respondents.

No estimates of these errors are available. However, the number of proxy interviews, the average number of interviews per interviewer and statistics on the last updates of the questionnaire, are all related to the error sources listed above.

Table 4.4 Share of proxy interviews, number of interviews per interviewer and last update of the questionnaire

-	-	Number of interviews <sup>1</sup> per interviewer (per	Date of the last update	Date of the last pilot survey in order to test	Number of respondents to the
Country	% of proxy interviews1	quarter)	of the questionnaire	the questionnaire	pilot survey
EU-25	37.9	150	-	-	-
BE	22.6	-	May 2005		
BG	41.5	62	Q1 2004	2002	18 000
CZ	48.1	434	September 2005	2001	891
DK	2.6	-			
DE	26.6	86	yearly	2000	11 000 households
EE	15.3	60	January 2005	Nov-Dec 2004	78
ΙE	43.1	-	•		
EL	43.6	-			
ES <sup>2</sup>	52.9	364	2005	2004	3 500 households
FR	32.1	105	2nd quarter of 2005 January 2005 for Q1, Q3	2004	254
ΙΤ	40.3	388	e Q4 - April 2005 for AHM	December 2004	900 households
CY	29.9	725	January 2003	February 2003	30
LV	39.9	103	January 2005	, , , , , , , , , , , , , , , , , , , ,	
LT	43.2	72	November 2004	December 2004	40
LU	52.4	-			
HU	42.7	125	October 2004	August 2004	About 300
MT	48.2	-	January 2005	N	
NL	46.6	-	•		
АТ	27.6	-	Each quarter, last update Q4 2005	Test of questions on education in summer 2005	about 3.000
PL	41.6	53	Q1 2005		
PT	45.8	197	2005	No pilot test	NA
RO	28.2	69	for the 2005 LFS	June 2004	100 households
SI	57.6	366	January 2005		
SK	61.6	445	2005	1992	
FI	6.9	213	January 2004		
SE	2.8	206	October 2004. Minor changes April 2005	Pilot studies in March and June 2004.	1400
UK²	34.4	135	March 2005	Sep/Oct 2004	444 households, 1093 individuals
HR	38.5	131	2004	?	?
IS <sup>2</sup>	0.8	-			
NO <sup>2</sup>	13.7	-			
CH	0.4	116	April 2005	February 2005	200

<sup>&</sup>lt;sup>1</sup> 15-74 years respondents. <sup>2</sup> 16-74 years respondents

#### **Processing errors**

Between data collection and the beginning of statistical analysis for the production of statistics, data must undergo a certain processing: coding, data entry, data editing, imputation, etc. Errors introduced at these stages are called **processing errors**.

No estimates can be produced indicating the rate of processing errors in the EU-LFS.

#### Non-response errors

Non response is the failure of a survey to collect data on all survey variables, from all the population units designated for data collection in a sample or complete enumeration. The difference between the statistics computed from the collected data and those that would be computed if there were no missing values is the **non response error**.

Tables 4.5 and 4.6 do not show fully comparable non-response rates. All of the countries, except Denmark, Finland, Sweden, Iceland, Norway and Switzerland calculate non-response on the basis of the household unit. The enumerated countries calculate non-response on person basis. The treatment of non-response in the follow up waves is also different between countries. Some Participating Countries

do not take previous non-response into account when calculating the non-response in later waves, whereas others do. Thus the former countries may show lower non-response rates on the average than the latter.

Table 4.5 Rates of non response by wave. Annual average 2005

%								
Country	1	2	3	4	5	6	7	8
BE	20.6							
BG	21.6	16.0	16.2	12.7				
CZ	21.5	19.2	19.3	19.3	19.7			
DK	36.1	35.2	38.5					
DE¹		4	.4		•			
EE	31.2	25.9	23.7	20.5	•			
ΙE	-	-	-	-	-			
EL	-	-	-	-	-	-		
ES	24.5			18.7				
FR	20.7	20.4	19.5	18.8	18.8	16.2	•	
IT	19.0	6.9	5.5	4.6				
CY	-	-	-	-	-	-		
LV	28.4	21.6	18.9					
LT	15.4	12.8	11.1	10.4				
LU	-	-						
HU	24.9	18.0	10.5	8.1	7.0	6.5		
MT	17.3	18.8						
NL	33.0	17.7	6.1	5.3	4.9			
AT	11.9	11.4	10.7	10.0	9.5			
PL	23.7	22.7	19.4	19.0				
PT	-	-	-	-	-	-		
RO	6.1	4.2	3.2	2.7		_		
SI	26.0		12	2.0				
SK	11.6	-	-	-	-	-		
FI	17.4	16.4	16.2	16.7	17.1			
SE	20.7	18.5	17.8	17.8	18.2	18.2	17.7	17.5
UK	25.7	33.1	34.2	37.0	39.6			
HR								
IS	17.7	17.4	18.4	18.3	18.4			
NO	13.9	12.4	11.5	12.1	11.8	11.5	11.6	11.3
CH	28.1	16.5	11.9	10.3	9.4			

<sup>&</sup>lt;sup>1</sup> Survey waves are on annual, but not quarterly basis.

Table 4.6 Non-response by type of non-response. Annual average 2005

Country	Total	Refusals	Non-contacts	Other reasons
BE	20.8	2.0	9.3	9.8
BG	16.7	3.9	11.9	0.9
CZ	19.8	14.3	4.9	0.6
DK	36.6	-	-	-
DE¹	4.4	-	-	-
EE	25.1	7.7	16.5	0.9
ΙΕ	9.1	-	-	-
EL	-	-	-	-
ES	19.6	9.0	8.8	1.8
FR	19.1	4.1	10.8	4.2

IT	9.4	3.5	4.5	1.4
CY	2.8	2.3	0.4	0.2
LV	21.4	7.5	11.0	3.0
LT	12.5	2.8	9.3	0.3
LU	67.0	16.0	21.0	30.0
HU	12.5	3.6	7.3	1.7
MT	18.0	2.7	15.3	-
NL <sup>2</sup>	13.4	-	-	-
AT	10.7	0.1	10.6	-
PL	21.2	12.5	6.8	1.9
PT	12.6	1.8	8.3	2.5
RO	4.0	1.2	1.8	1.1
SI	16.2	9.7	1.4	5.1
SK	6.9	5.3	0.4	1.3
FI	16.8	10.8	5.8	0.2
SE	17.8	7.6	9.6	0.6
UK	34.1	30.5	3.6	-
HR	16.0	6.2	4.7	5.1
IS	17.9	9.4	6.6	2.0
NO <sup>2</sup>	12.0	-	-	-
СН	18.0	6.0	8.3	3.7

<sup>1</sup> Yearly average, most non-response appears to arise due to non-contact. 2 Average of the waves in table 4.5

# 5 Timeliness and punctuality

**Timeliness** of statistics reflects the length of time between their availability and the event or phenomenon they describe.

**Punctuality** refers to the time lag between the release date of data and the target date on which they should have been delivered, with reference to dates announced in some official release calendar, for instance, laid down by Regulations or previously agreed among partners.

According to the Council Regulation (EC) No 577/98 data shall be delivered to Eurostat within twelve weeks from the end of a reference quarter. Table 5.1 shows that data are transmitted to Eurostat for most countries in the third month after the end of the quarter. First releases of data in majority of the Participating Countries is in the first two months after the end of the quarter.

Table 5.1 First release nationally, transmission to Eurostat and Eurostat's dissemination of LFS data by number of calendar days from the end of the reference period 2005 – quarterly LFS only<sup>1</sup>

Number of countries

First release nationally	2004	2005			
Number of calendar days from end of reference period	All	All	EU-25	Euro area	
<31	5	5	4	3	
31-60	8	8	6	1	
61-90	3	6	6	1	
91+	9	5	4	2	
Annual only or no publication <sup>2</sup>	3	4	4	4	
Not known	0	1	1	11_	
Total	28	29	25	12	
Average number of calendar days	72	70	75	64	
Transmission to Eurostat					
<31	0	0	0	0	

31-60	3	3	2	1
61-90	15	20	18	7
91+	10	6	5	4
Total	28	29	25	12
Average number of calendar days	101	85	86	94
Eurostat's dissemination of national data (web site)				
<31	0	0	0	0
31-60	1	0	0	0
61-90	4	0	0	0
91+	23	29	25	12
Total	28	29	25	12
Average number of calendar days	121	111	112	120

<sup>&</sup>lt;sup>1</sup> I.e. not incl. Germany (2004), Croatia and Switzerland.

The release of EU-LFS data is not bound by an advance calendar of publication. The Eurostat website is updated continually with new data as they arrive within two or three weeks from final data processing in Eurostat.

# 6 Accessibility and clarity

Accessibility and clarity refer to the simplicity and ease for users to access statistics using simple and user-friendly procedures, obtaining them in an expected form and within an acceptable time period, with the appropriate user information and assistance: a global context which finally enables them to make optimum use of the statistics.

In 2005 Eurostat published the quarterly and annual results in the series Statistics in Focus.

Eurostat publishes annually a compendium describing the main characteristics of the national surveys.

The Eurostat public website is free of charge and includes main indicators, derived from the Labour Force Survey, as well as a special sub-domain providing detailed, constantly updated main results from the EU-LFS

All data on the website are attached to meta-data in SDDS format, giving basic information on the background and a summary of the methodology.

Through a world-wide network of data-shops, as well as with direct queries, customised EU-LFS results are available to users in electronic format. These data are also produced free of charge.

Researchers may purchase anonymised datasets containing microdata, if certain conditions are fulfilled. Data from al Member States except Malta and the United Kingdom are available in this format.

# 7 Comparability

Comparability aims at measuring the impact of differences in applied statistical concepts and definitions on the comparison of statistics between geographical areas, non-geographical domains, or

<sup>&</sup>lt;sup>2</sup> Belgium, France, Luxembourg, Also Germany, as no data is published nationally from the quarterly German LFS.

over time. We can say that it is the extent to which differences between statistics are attributed to differences between the true values of the statistical characteristics.

# 7.1 Comparability over time

No change was introduced in 2005 to the concepts or measurements in the EU-LFS. Three countries, however, made major changes to their survey in 2005.

Germany implemented the quarterly continuous survey in 2005 along with changes to the questionnaire; Sweden introduced considerable changes in April 2005 concerning the questionnaire, the sample selection and the weighting scheme, while Spain introduced a new questionnaire in full compliance with the EU regulations.

Table 7.1 Availability of micro-data from the EU-LFS'

Country	Spring quarter micro-data available from	Quarterly micro- data available from	Reference week evenly spread over the quarter from	Remarks
BE	1983	1999	1999	1983-1998: One week in the second quarter
CZ	1998	1998	1997	1997: Seasonal quarters 2 and 4
DK	1983	1999	1994	1992-1993: More than one week spread unevenly over 1st and 2nd quarter
DE	1983	2005	2005	1983-2004: One week in the 2nd quarter
EE	1997	2000	2000	1997-1999: All weeks in 2nd quarter not uniformly spread
EL	1983	1998	1996	1992-1995: All weeks in 2nd quarter not uniformly spread
ES	1986	1996	1999	1996-1998: Evenly spread with the exception of 4 weeks in August (not surveyed due to interviewers' holidays)
FR	1983	2003	2003	1983-2002: Survey conducted in the first quarter of the year. 1992-2002: More than one week, but not uniformly spread in one quarter
IE	1983	1999q2	1998	1992-1997: More than one week, but not uniformly spread in one quarter 1998+: Seasonal quarters
IT	1983	1992q4	2004	1983-2003: One week per quarter
CY	1999	2004q2	1999	' '
LV	1998	2002	2002	1998-2001: All weeks in 2nd and 4th quarter not uniformly spread (semi-annual results)
LT	1998	2002	2002q3	1998-2001: One week in 2nd and 4th quarter each (semi-annual results) 2002q1-q2: One week per quarter
LU	1983	-	-	1983-2002: One week per quarter 2003+: All weeks of the year, but not uniformly spread, quarterly breakdowns not available.
HU	1996	1999	-	1999-2002: One week per month 2003+: 3 weeks per month not uniformly spread
MT	2000	2002	2004	2000-2003: One week per quarter
NL	1987	2000	2000	1987-1999: 1st to 22nd/23rd week surveyed, not uniformly spread
AT	1995	1999	2004	1995-2003: More than one week at the end of the quarter, not uniformly spread
PL	1997	2000	2000	
PT	1986	1996q2	1998	1986-1991: One week in 1 <sup>st</sup> and 2 <sup>nd</sup> quarter. 1992-1997: More than one week per quarter, not uniformly spread
SI	1996	1999	-	1996-2001: One week per quarter 2002+: All or most weeks surveyed, not uniformly spread
SK	1998	1998	1998	1998-1999: Seasonal quarters
FI	1995	1998	2000	1995-1999: Monthly survey, one week per month 2000+: Continuous survey. Uniformly spread over the weeks of the month, months of each quarter have 4-4-5 weeks

Table 7.1 Availability of micro-data from the EU-LFS<sup>1</sup>

Country	Spring quarter micro-data available from	Quarterly micro- data available from	Reference week evenly spread over the quarter from	Remarks
SE	1995	2001	1999	1995-1998: Uniformly spread over 4 weeks of one month
UK	1983	1999q2	1992	1984+: Seasonal quarters
BG	2000	2000	-	2000-2002: One week per quarter 2003+: Uniformly spread over the first 12 weeks of each quarter
HR	2002	-	-	2002+: Half-year results, one reference week per month
RO	1997	1999	-	1998-2004: Most or all weeks of the quarter, not uniformly spread 2005: Uniformly spread over any 12 weeks of each quarter
IS	1995	2003	2003	1995-2002: One week per quarter
NO	1995	2000	1996	1995: One week per month
СН	1996	-	-	1995+: All or most weeks surveyed, not uniformly spread. 2009?: Quarterly, continuous planned

<sup>&</sup>lt;sup>1</sup> The table reflects the actual data availability in the databases of Eurostat in June 2007. National surveys may, e.g., have started producing quarterly results while only spring results were delivered to Eurostat. A continuous survey is defined when the interviews are spread uniformly over all the weeks of the quarter.

Table 7.2 Improvements or changes compared to previous year

Country	Change	Impact of the changes on the statistics.
DE	Continuous quarterly survey started in 2005, new weighting scheme	New questions on employment cause increase in the employment levels. Estimates of impact not yet available.
Ec		The new method estimates 77800 unemployed less
ES	Revision of the questionnaire	The new method estimates 132000 employed more
		The new definition results in higher estimate of unemployed. Estimates of impact not yet available.
SE	Revision of the questionnaire, new weighting scheme	The new definition includes resident persons, having their work- place abroad, giving higher estimate of the number of employed. Estimates of impact not yet available.

# 7.2 Comparability over space

A common Council regulation,<sup>9</sup> common variable definition<sup>10</sup>, common explanatory notes<sup>11</sup> and common regulation<sup>12</sup> regarding the definition of unemployment and the twelve principles of questionnaire construction go a long way to ensure comparability of the statistics between the Participating Countries. This is, however, mainly true for the main characteristics, employment and unemployment where particular definitions and sequence of questions are part of the EU legislation. For other variables, each country has the responsibility to ensure that the national survey provides data that are compatible with the EU definitions and of the same quality.

Eurostat has commissioned several reports in order to examine the degree to which the Participating Countries adhere to the common set of definitions. The last such study was done for 2001. Too many changes have occurred since in the execution of the EU-LFS for the results of this study to be presented here.

21

<sup>9</sup> Council Regulation (EC) No 577/98.

Commission Regulation (EC) No 1575/2000.

The European Union Labour Force Survey. Methods and definitions – 2001.

<sup>&</sup>lt;sup>12</sup> Commission Regulation (EC) No 1897/2000.

As most of the variables are defined in accordance with recommendations of the ILO and other international organisations the statistics from the EU-LFS is in the main directly comparable to those of other industrialised countries, especially those of the other members of the OECD.

#### 8 Coherence

Coherence of statistics is their adequacy to be reliably combined in different ways and for various uses. It is, however, generally easier to show cases of incoherence than to prove coherence. The following sections show comparable data from other sources, the population and employment data from national accounts. Other comparisons are possible, such as with employment data from the Structural Business Survey and the Labour Cost Survey.

#### 8.1 Coherence with population statistics

The coherence with population statistics is of importance for the users, as often the most recent population estimates are available from the EU-LFS statistics. These two statistics are, however, not fully comparable.

Most of the Participating Countries carried out a Population Census in the 2001 Round. New censuses often result in new weights, new sample frames or new sample designs. By 2004 all of the Participating Countries had revised the weights to reflect new population estimates. Re-weighting of previous data series have, however, not always been implemented.

There are other differences that need to 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 age of the population.

Table 8.1 Coherence with population statistics 2005

	Popula	tion 15-64 1/1	/2005	LFS annua	al average 15-	-64 2005	Relative di	fference [(L-F	P)/P*100]
Country	Total	Men	Women	Total	Men	Women	Total	Men	Women
EU-251	308 622	154 565	154 057	305 142	152 114	153 029	-1.1	-1.6	-0.7
BE	6 851	3 448	3 404	6 876	3 459	3 417	0.4	0.3	0.4
BG	5 357	2 663	2 694	5 283	2 614	2 669	-1.4	-1.8	-1.0
CZ	7 259	3 639	3 620	7 270	3 646	3 624	0.1	0.2	0.1
DK	3 581	1 808	1 773	3 566	1 799	1 767	-0.4	-0.5	-0.3
DE	55 209	27 964	27 245	54 765	27 559	27 206	-0.8	-1.4	-0.1
EE	917	440	477	910	434	476	-0.8	-1.5	-0.2
IE	2 800	1 409	1 391	2 831	1 425	1 406	1.1	1.1	1.1
EL	7 478	3 771	3 707	7 132	3 551	3 581	-4.6	-5.8	-3.4
ES	29 569	14 913	14 656	29 755	15 019	14 736	0.6	0.7	0.6
FR¹	39 531	19 670	19 861	38 749	19 132	19 617	-2.0	-2.7	-1.2
IT	38 827	19 418	19 410	38 588	19 248	19 340	-0.6	-0.9	-0.4
CY	516	255	261	494	240	254	-4.3	-6.2	-2.5
LV	1 584	764	820	1 583	763	820	-0.1	-0.1	0.0
LT	2 323	1 121	1 202	2 322	1 119	1 202	-0.1	-0.2	0.0

Table 8.1 Coherence with population statistics 2005

	Popular	tion 15-64 1/1	/2005	LFS annua	al average 15-	-64 2005	Relative di	fference [(L-F	P)/P*100]
Country	Total	Men	Women	Total	Men	Women	Total	Men	Women
LU	305	154	151	304	153	151	-0.4	-0.7	0.0
HU	6 940	3 407	3 533	6 815	3 328	3 486	-1.8	-2.3	-1.3
MT	278	140	138	274	138	136	-1.5	-1.9	-1.1
NL	11 008	5 562	5 446	10 943	5 519	5 424	-0.6	-0.8	-0.4
AT	5 572	2 789	2 783	5 516	2 745	2 770	-1.0	-1.6	-0.5
PL	26 778	13 305	13 474	26 211	12 986	13 225	-2.1	-2.4	-1.8
PT	7 091	3 501	3 591	7 115	3 516	3 599	0.3	0.4	0.2
RO	15 047	7 495	7 552	15 021	7 467	7 554	-0.2	-0.4	0.0
SI	1 404	714	691	1 402	713	690	-0.2	-0.2	-0.2
SK	3 840	1 909	1 931	3 824	1 899	1 926	-0.4	-0.5	-0.3
FI	3 491	1 765	1 727	3 476	1 747	1 728	-0.4	-1.0	0.1
SE	5 873	2 983	2 890	5 896	2 993	2 903	0.4	0.3	0.5
UK	39 594	19 717	19 878	38 529	18 983	19 546	-2.7	-3.7	-1.7
HR	2 988	1 487	1 501	2 746	1 354	1 392	-8.1	-8.9	-7.3
IS²	189	96	93	184	93	90	-2.7	-2.4	-3.0
NO <sup>2</sup>	2 959	1 502	1 458	2 997	1 518	1 480	1.3	1.1	1.5
СН	5 035	2 523	2 512	5 035	2 523	2 512	0.0	0.0	0.0

<sup>&</sup>lt;sup>1</sup> Not including the overseas departments of France.

Source: Eurostat website, 11/6/2007

# 8.2 Coherence with other employment estimates

Key concepts used in National Accounts, such as domestic employment, have no correspondence in the EU-LFS, which uses instead number of persons employed based on residency within the national border (national employment). There are also differences in coverage, where the EU-LFS covers the age groups 15 and older in private households only, while the national accounts cover all persons regardless of age or residence. In addition, the EU-LFS doesn't consider conscripts and unpaid trainees as employed whereas these are explicitly or implicitly accounted for in the National Accounts. The reference period for the measurement could also contribute to some differences. The LFS represent one average week in the year with all the weeks of the year measured. When data are derived from administrative sources or establishment surveys the reference period is usually different, the month, the whole year or a single day within the year or month.

As expected, the employment estimates based on the LFS data usually lie somewhat below the estimates of employment as estimated by National Accounts, as shown by table 8.2. For six countries, however, the opposite is true, although only in Greece and Romania are the LFS significantly above the National Accounts figures.

Table 8.2 Employment (national concept) 2005 in two different datasets on the Eurostat website

x1000

		Absolute difference	Relative difference	
Country	National accounts <sup>1</sup>	LFS-NA	% of NA	Labour force survey <sup>2</sup>
EU-25 <sup>3</sup>	202 410	-4 590	-2.3	197 821
BE	4 264	-29	-0.7	4 235
BG	3 495	-513	-14.7	2 982

At the moment, the Eurostat does not produce statistics on annual hours worked from the LFS, which have direct correspondence with similar statistics in National Accounts.

<sup>&</sup>lt;sup>2</sup> The age group 16-64 years. The LFS in NO refers to persons 16-64 on 31/12/2005

Table 8.2 Employment (national concept) 2005 in two different datasets on the Eurostat website

CZ	4 837	-73	-1.5	4 764
DK	2 759	-7	-0.2	2 752
DE	38 749	-2 095	-5.4	36 654
EE	610	-3	-0.4	607
IE	1 958	-6	-0.3	1 952
EL	4 148	221	5.3	4 369
ES	19 246	-273	-1.4	18 973
FR³	25 089	-511	-2.0	24 579
IT	24 226	-1 663	-6.9	22 563
CY	369	-21	-5.7	348
LV	1 026	8	0.8	1 034
LT	1 479	-5	-0.3	1 474
LU	199	-5	-2.7	194
HU	3 879	23	0.6	3 902
MT	153	-5	-2.9	149
NL	8 214	-103	-1.3	8 111
AT	:	;	;	3 824
PL	14 116	0	0.0	14 116
PT	5 123	0	0.0	5 123
RO	8 480	635	7.5	9 115
SI	924	25	2.7	949
SK	2 216	-1	0.0	2 215
FI	2 402	-1	0.0	2 401
SE	4 323	24	0.5	4 347
UK	28 586	-399	-1.4	28 187
HR	:	:	:	1 573
IS	161	-1	-0.7	160
NO	2 346	-63	-2.7	2 283

Source: Eurostat Website, 9 October 2007.

Notes: The LFS estimates are the average of the quarterly totals. Figures in italics are forecasted values. Data for Germany are provisional. 

¹ Economy and finance/National accounts (including GDP)/Annual national accounts/Auxiliary indicators (Population, employment and conversion rates)/Auxiliary indicators (Population and employment)

Employment – LFS adjusted series/Employment (main characteristics and rates) – Annual averages

It should, however, be recognised that the coverage, measurement and conceptual differences mentioned above do not account for but a relatively small part of the difference between the two estimates. As a rule of thumb, relative differences of more than 1.5% need to be explained by other reasons. This would concern 12 Participating Countries shown in table 8.2. Germany and Italy are responsible for the bulk of the absolute difference between the National Accounts estimates and the LFS, with Bulgaria showing the highest relative discrepancies. Six countries have discrepancies of more than 5%.

When comparing LFS data and National Account statistics, users are also interested in whether or not the two approaches show the same trend, i.e. change from one period to another.

Table 8.3 compares the data on employment growth until 2005. The data sources are the EU-LFS and national accounts (ESA95) data. The data is analysed in terms of the importance of the LFS in the production of the National accounts data on employment growth.

<sup>&</sup>lt;sup>2</sup> Population and social conditions/Labour market/Employment and unemployment (LFS)/LFS main indicators/

<sup>&</sup>lt;sup>3</sup> The National Accounts estimates include the overseas departments, whereas the LFS only covers the mainland territory of France.

The results show that both sources are broadly comparable with relation to the direction of the employment growth. If the ESA95 data are not predominantly based on the LFS, the differences are mostly marked in the levels of the growth figures, and in 2004 and 2005 disparities have developed in otherwise comparable series.

The reasons for the disparities, either in levels or in the direction of the employment growth are not fully known. Some indicative reasons can, however, be mentioned: national accounts may use sources different than LFS (or LFS combined with other sources) to estimate employment, national accounts may introduce adjustments to reach consistency between the employment reported by its sources and other related variables, like salaries or production, national accounts approach, by comparing and combining different sources, is also more prone than LFS to identify underreporting or systematic biases. In addition, it can be pointed out that LFS estimates are subject to sampling error, both with regard to levels and changes between periods (cf. tables 4.1 and 4.2). Thus, when there are relatively small changes between periods, these could easily be shown numerically differently in the different estimates, just because the changes are within the margin of error.

Table 8.3 Comparison between the LFS and ESA employment growth

Group		Method	Comparable LFS & NA growth	Different LFS & NA growth		
1.		Countries using LFS as their only source for employment in national accounts.  LFS needs to be adjusted to align it to SNA93 or ESA95 (see section III below).	Estonia, Hungary, Ireland, Lithuania, United Kingdom	Cyprus		
2.		Countries using mainly LFS, but replacing it in few industries (or labour status), on a case-by-case basis.	Latvia, Portugal	Bulgaria, Greece		
3.		Countries combining sources for labour supply and demand, LFS being one source among others.  This group is rather heterogeneous and can be sub-divided as follows:				
	3a	Countries giving preponderance to labour-supply sources (i.e. LFS).	Finland, Norway, <b>Slovakia</b> , <b>Spain</b> Sweden			
	3b	Countries not giving preponderance to any labour side.	Italy*(2004), Germany*(2004)			
	3c	Countries giving preponderance to labour-demand sources (i.e. employment registers and/or enterprise surveys)	Denmark	Malta Austria		
4.		Countries not using LFS, or making minimal use of it	Czech Republic* (2003), France*(2003) the Netherlands*(2004)	Belgium, Iceland, Poland and Slovenia		

Source. Based on the annual average of quarterly results. The comparison is preliminary and could change.

Countries in **bold font** - the trend in the LFS & NA growth is comparable, however the levels of the growth figures are not consistent. The asterix (\*) denotes the countries with a comparable trend in the past but with some disparities in recent series (starting in the year given in the brackets).

Additional notes:

IT – inconsistency in 2004, comparable trend in the quarterly data for 2005

CZ – inconsistency in 2003, comparable trend in 2004 (further analysis of quarterly data for 2005 necessary)

NL - inconsistency in 2004, further analysis of quarterly data for 2005 necessary

# 9 Regional unemployment

#### 9.1 Introduction

The quality report for the EU-LFS has been combined with the regional labour market statistics into a joint standard quality report as a combined effort of the Eurostat units F2-Labour market statistics and D2- Regional indicators and geographical information.

The EU-LFS is only designed to give accurate annual information on NUTS-II level. For the purposes of regional statistics, as well as monitoring for the Structural Funds, unit D2 needs not only NUTS-II data but may also require NUTS-III data.

Depending on the available information in the Participating Countries, the NUTS-III unemployment compilations methods differ for the different countries. Some countries use the annual average of the LFS-data, only one country uses a 3-year average from the LFS-data and some countries use combined information of the LFS and registered unemployment. The base benchmark for NUTS-III labour market figures is the EU-LFS NUTS-II results. The EU-LFS NUTS-II data (economically active population and unemployed persons) are distributed to NUTS-III either according to the distribution of LFS NUTS-III figures or to the distribution of register data. Because of the non-sampling errors and because of the (combined) use of registered unemployment, it is well nigh impossible to assess the accuracy for NUTS-III level according to scientific standards. Because of that some countries were not able to provide coefficients of variation (CV) at NUTS-III level.

The first eight sections have been devoted to the national part of the quality assessment of LFS. This ninth and last section will be devoted to the regional labour market statistics.

# 9.2 Sources for NUTS-III compilation of unemployment

For a limited number of countries the NUTS-III compilation of unemployment is based on registers, or a combination of registers and LFS. These are Belgium, Denmark, France, Germany, Austria, Portugal, Slovenia and Sweden. For all other Member States including Romania and Bulgaria the NUTS-III data are derived from the national LFS.

Denmark, Estonia, Cyprus, Luxembourg, Malta, Latvia, Lithuania, Slovenia and Iceland comprise a single NUTS-II region, i.e. national data represent NUTS-II results (as well as NUTS-1 results).

Luxembourg and Cyprus comprise a single NUTS-III region, i.e. national data represent NUTS-III results (as well as NUTS-1 and NUTS-II results).

Norway provides Eurostat with labour force data on NUTS-III level but no other EFTA country does.

There are no unemployment and economically active population data divided by sex and age (15-24, 25 and over) available at NUTS-III level for Germany and France (only the totals for unemployment and economically population by age are available).

Unemployment data (absolute levels) for Portugal at NUTS-III were for the first time published by Eurostat in 2004. Data on the economically active population and unemployment rates at NUTS-III level will be published in September 2006.

The annual average of unemployment by NUTS-III regions from the national LFS is compiled by the Czech Republic, Greece, Spain, Ireland, Italy, Hungary, Malta, Latvia, Lithuania, the Netherlands, Slovakia, Finland, UK and Bulgaria. Poland provides a three year average that is based on the LFS.

Estonia, Slovenia and Sweden allocate the number of unemployed persons and economically active population on NUTS-II level as found by the LFS to NUTS-III level with the help of register data. For Portugal, Eurostat produces data, basing the NUTS III compilation of unemployment on a combination of registers and the LFS.

For Belgium, Denmark, Germany, France and Austria estimates on unemployment and economic activity at NUTS-III are based solely on the structure (distribution) of register data.

# 9.3 Coefficient of variation at NUTS-II and NUTS-III for the rate of unemployment

Table 9.1 gives a summary of the coefficients of variation for the rate of unemployment. Only the lowest and the highest coefficients are shown.

Table 9.1 Coefficient of variation (CV) for the rate of unemployment, 2005

	CV of regional (NUTS-II) annual aggregates in percentage		CV of regional (NUTS-III) annual aggregates in percentage	
Countries	Lowest	Highest	Lowest	Highest
BE	4.7	8.7		-
BG	5.2	9.6	6.2	24.4
CZ	3.6	8.9	3.6	9.3
DK	-	-	-	-
DE	2.1	8.5		
EE	-	-	9.9	15.9
IE				
EL				
ES	1.6	13.0	2.5	13.0
FR				
IT	2.2	10.2		
CY	-	-	-	-
LV	-	-	6.4	14.5
LT	-	-	10.1	38.0
LU	-	-	-	-
HU	5.1	7.3	7.0	15.6
MT	-	-	4.1	16.4
NL	3.4	11.2	4.7	19.6
AT	4.3	8.6		
PL	3.4	6.5	4.2	12.3
PT	4.3	13.4		
RO	8.0	13.9		
SI	-	-		
SK	2.3	15.1	2.9	15.1
FI	2.5	20.5	3.6	20.5
SE	4.0	6.9	4.0	15.3
UK¹	4.2	17.6		
HR	4.8	6.3	6.8	31.1
IS	-	-	-	-
NO	4.9	8.3	-	-
CH	5.9	11.7	-	-

Note: Hyphen "-" indicates that CV at the regional level is not applicable, either because the regional level does not differ from the higher NUTS level, that the country is not required to deliver NUTS-III employment and unemployment data, or that the source is not the LFS. Blank indicates that no information on the regional CV is supplied.

The EU-LFS is designed to give reliable estimates on the NUTS-II level of aggregation, provide the population of the region in question exceeds 300 000 inhabitants. The coefficients of variations given in table 9.1 are nevertheless provided for regions which have small populations and hence small sample sizes. In the EU-25, 22 out of 254 NUTS-II regions have a population less than 300 000. This will tend to inflate the CVs and the range of CVs.

As expected, the CVs for the NUTS-III regions are bigger and have higher range than for the NUTS-II regions. Of the fourteen countries providing data on NUTS-III level, four have CVs less than 15% and further six countries with all the regional CVs less than 20%. When counting the regions, the picture is even better; 84.2% of the 292 NUTS-III regions for which data are available, have CV less than 15% and 94.5% less than 20%.

<sup>&</sup>lt;sup>1</sup> Number of unemployed.

#### European Commission

#### **Quality Report of the European Union Labour Force Survey 2005**

Luxembourg: Office for Official Publications of the European Communities

2007 — 27 pp. — 21 x 29.7 cm

ISBN 978-92-79-04747-3 ISSN 1977-0375