

# European Union Labour Force Survey Quality report 2004



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## 1 Introduction

The present report is a Quality Report on the European Union Labour Force Survey (EU-LFS) for the year 2004.

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 2005 constitute the main source for the present report. By 1 June 2005 twenty-seven 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 and 2003, websites of the individual countries, the LFS datasets for 2004 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 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 "Final Report of the Task Force for Evaluating the 2004 LFS Ad Hoc Module on Work Organisation and Working Time Arrangements".

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

## 2 General description

### Coverage

The EU-LFS covers the 25 Member States of the Union. In addition the survey covers member states 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, 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 Member States 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.

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<sup>1</sup> 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 CIRCA\Quality in Statistics.

<sup>2</sup> Due to national legislative reasons Turkey has been unable to comply with this requirement. Turkey is expected to start delivering micro-data from 2006.

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## Legislation

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

**Table 2.1 Major regulations of the EU- LFS**

<b>General regulations</b>	<b>Comments</b>
<a href="#">Council Regulation (EC) No 577/98</a> 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.
<a href="#">Regulation (EC) No 1991/2002</a> 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.
<a href="#">Regulation (EC) No 2257/2003</a> of the European Parliament and of the Council of 25 November 2003 amending Council Regulation (EC) No 577/98 on the organisation of a labour force sample survey in the Community to adapt the list of survey characteristics (OJ No L 336/6).	This regulation will be implemented from 2006
<b>Implementation regulations</b>	
<a href="#">Commission Regulation (EC) No 1575/2000</a> 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)
<a href="#">Commission Regulation (EC) No 1897/2000</a> 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
<a href="#">Commission Regulation (EC) No 2104/2002</a> 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).	
<a href="#">Commission Regulation (EC) No 430/2005</a> of 15 March 2005 implementing Council Regulation (EC) No 577/98 on the organisation of a labour force sample survey in the Community concerning the codification to be used for data transmission from 2006 onwards and the use of a sub-sample for the collection of data on structural variables	This regulation adopts the wave approach, implements the new variables in <a href="#">Regulation (EC) No 2257/2003</a> , as well as implementing a new coding scheme

## Participation

The participation in the EU-LFS is compulsory in twelve Member States (Belgium, Germany, Spain, France, Italy, Cyprus, Malta, Austria, Portugal, Slovakia, Turkey and Norway), but voluntary in 19 MS. Information is not available for Greece.

## Reference week

The reference week is one week in each quarter starting on Monday and ending on Sunday. In all countries but Germany, 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 Greece, Cyprus and the Netherlands the spread is roughly uniform. The first week of the year or quarter is the week that contains the first Thursday of the year or the quarter. The first week in 2004 started on Monday 29 December 2003 except in Ireland and the United Kingdom, which provide data for the seasonal quarters. In these countries the year 2004 started in the 48<sup>th</sup> week of the year 2003. In Hungary the first reference week in 2004 started on Monday 5 January.

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Every 5<sup>th</sup> or 6<sup>th</sup> year or so, the year has 53 weeks. This occurred in 2004 when the third quarter (July, August and September) had 14 weeks instead of 13. Most Member States nevertheless defined the third quarter as the weeks 26 to 39 and the fourth quarter as the weeks 40 to 53. Denmark, Hungary, Portugal and Iceland had the 40<sup>th</sup> week belonging to the third quarter. In order to adjust the seasonal year, United Kingdom skipped surveying the 9<sup>th</sup> week of the year, which fell between the 1<sup>st</sup> and 2<sup>nd</sup> seasonal quarters.

Three main methods were used in dealing with the extra week. Fourteen countries skipped one week or reduced the sample size for that week to a virtual zero (Belgium, Czech Republic, Estonia, Greece, Malta, Netherlands, Austria, Slovenia, Slovakia, United Kingdom, Bulgaria, Romania and Iceland). Denmark, Italy, Spain, Portugal and Norway selected two typical weeks in the quarter defined to have 14 weeks and divided one weekly sample over these weeks. France, Cyprus, Latvia, Lithuania, Poland, Finland and Sweden spread the 4<sup>th</sup> quarter sample over all 14 weeks of the last quarter. For the remaining countries, the design of the survey either did not require special treatment of the extra week or no information is available (Turkey).

### ***Periodicity of the results***

With the exception of Germany, Luxembourg and Switzerland, the EU-LFS in 2004 produces quarterly estimates. Germany and Switzerland only provide estimates relating to the second quarter of the year. For main characteristics, however, Germany provides quarterly estimates based on other sources.<sup>3</sup> Luxembourg, even if implementing a survey covering all weeks of the year in 2004, is only able to provide annual estimates. Cyprus started quarterly continuous survey in 2004, covering the last three quarters of the year. Annual average for Cyprus in 2004 is calculated in the EU-LFS from these three quarters and the first quarter of 2005.

### ***Sampling design***

The sampling designs in the EU-LFS are extremely varied. Most NSIs employ 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 Germany and the Netherlands complete this information with Census or Postal data.

#### ***Sampling stages and primary sampling units (PSU)***

Denmark, Luxembourg, Malta, Austria, Finland, Sweden, the United Kingdom, Iceland and Norway use a single stage sampling design. Estonia and Germany use two-phase sampling design. In Estonia a sub-set of individuals from the initial sample of individuals is drawn using sampling probabilities inverse to number of persons aged 15-74 in the household in order to select that individual and all the members of the household into the final sample. In Germany the 1% sample of the micro-census is systematically sub-sampled in the second phase using different sampling rates (1, 0.8, 0.6 and 0.4) in order to achieve the sample size by NUTS II regions required by the LFS regulation. In Lithuania and Slovenia all members of the household of the selected individual are selected into the final sample.<sup>4</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>5</sup>

No information about the number of sampling stages is available for Greece.

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<sup>3</sup> These characteristics include labour status (ILO definition) by sex and age, broad groups of economic activity (A6) by sex and status in employment and full/time part-time distinction of employees by broad groups of economic activity.

<sup>4</sup> 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).

<sup>5</sup> 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.

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### **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>6</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 and the United Kingdom). 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 of the EU-LFS is 0.47% (EU-25: 0.49%). Ireland has by far the highest sampling rate per quarter or 3.3%, Luxembourg 2.6%, Malta and Iceland 2% and 1.9% respectively, while other Member States have sampling rates of 1.5% or less. The achieved sample in the second quarter of 2004 was 1.889 million individuals (EU-25: 1.681 mill.), of which 1.478 million were in the age group 15-74 years (EU-25: 1.306 mill.). The overall sampling rate in the EU-LFS is thus close to 0.4%.

### **Stratification**

All of the countries, except Lithuania, Malta, Turkey, Iceland and Switzerland 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 and United Kingdom). Urbanisation is also a popular stratification variable (Greece, France, Spain, Ireland, Cyprus, Hungary, 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).

### **Description of the rotation scheme**

All of the Member States but Croatia use a rotating panel design for the samples. The panels (/waves) number from two to eight panels. Panel designs with four and five panels are the most common. Each panel is either interviewed successively without interruption, or the panel may skip over one or more quarters before being interviewed again. Depending on the national emphasis, 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 28 countries with quarterly results, all but two design the panel rotation so that at least 50% of the samples overlap between two successive quarters (Denmark 33% and Latvia 0%). Belgium uses a two-panel design, but the EU-LFS data only refer to the first wave. 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 80%. Luxembourg retained 6,399 (ca. 27%) respondents from the previous year (2003) and spread over the last 39 weeks of the year 2004.

### **Brief description of the method of calculating the weighting factors**

The Council Regulation (EC) No 577/98 on the EU-LFS directs 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 raking-ratio methods, including generalised calibration. 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.

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<sup>6</sup> Person + spouse or registered partner + dependent children.

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

All countries with the exception of Croatia use gender in the weighting process. Germany and Croatia do not use age in the weighting process while five countries (Luxembourg, Hungary, Malta, Slovenia and Bulgaria) use broader age groups than five-year. All of the countries, except France, use at least NUTS II regions for calculating the weights, while sixteen countries (the Czech Republic, Estonia, Greece, Spain, Ireland, Italy, Latvia, Lithuania, Hungary, Malta, Slovakia, Slovenia, Finland, Sweden, Romania and Norway) have even finer 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 of the countries, who sample non-institutional households only, gross the sample to the non-institutional population with the exception of Belgium and Slovenia who gross to the total population.

### **Data collection methods**

Three modes of data collection exist for the EU-LFS, personal visits, telephone interviews and paper forms delivered by post. Many Member States mix the two first so that the first wave is always via personal visit while subsequent waves are with telephone if available. Germany collects data with a mix of mailed 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. Belgium uses all three modes in the second (last) interview. Luxembourg, Finland, Sweden, Iceland and Switzerland rely solely on telephone interviews. Nine countries (Estonia, Greece, Ireland, Latvia, Portugal, Bulgaria, Croatia, Romania and Turkey) collect data using only face-to-face interviews.

Nineteen of the countries — up by three from 2003 — rely solely on computerised questionnaire. Other three use both computerised and paper questionnaires. The rest use solely paper questionnaires.

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

Of the reporting countries only 17 reported the total cost of the survey. Using the number of interviews over the year by country as weight and extrapolating from the reported cost, the 31 participating countries can be expected to have spent approximately 17.54 Euros per interview in the year 2004 to gather the data or 87,325 million Euros in total.

Twenty four 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 17:11 minutes. Subsequent waves, on the other hand, lasted on the average only 8:34 minutes. Judging from the available information, the ad hoc module in 2004 cost 8:27 minutes of each respondent's time.

## **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 gathered according to predefined regulations containing a defined list of variables the relevancy can also be assessed by examining the completeness of the statistics measured against the relevant regulation.

The data repository on the Eurostat website was developed especially in order to ease the access of the main users to European statistics. Until October 2004 all users of datasets were registered. Unfortunately the statistics from website have been very elementary and do not help in identifying the main users or their areas of

interest. For outside users and special data requests not covered by web-data unit F-2 has, however, kept some statistics for the year 2004.

### 3.1 The Users

No survey exists with regard to users of labour force statistics disseminated by Eurostat. The main institutional users, however, are recognised by the unit F-2 and are constantly consulted on various aspects of development and dissemination of labour force statistics.

**Table 3.1.1 Classification and description of users**

<i>User</i>	<i>Classification of user</i>	<i>Description of user</i>
1	DG EMPL	The policy arm of the Commission regarding the labour market
2	ECB	The European Central Bank
3	ESTAT - Unit D2	Regional indicators and geographical information
4	ESTAT - Unit C2	National accounts - production
5	ESTAT - Unit F4	Education, science and culture statistics
6	Other registered users of the web-data	Including NSIs, international organisations
7	The public	Researchers, news agencies and other

**Table 3.1.2.a Users' needs origin**

<i>User (from table 3.1.1)</i>	<i>Needs In term of theoretical concepts</i>	<i>Source</i>	<i>Reference document</i>
1	Measurement and monitoring of policy agendas		
2	Short term statistics relating to Euro zone		
3	Detailed regional statistics		
4	Accurate estimates of labour input, using both the national and domestic concept		
5	Estimates on current education and education levels, higher education and research		
6	International comparison of main indicators		
7	Varied, mainly intra EU comparisons		

**Table 3.1.2.b Users needs satisfaction**

<i>User (from table 3.1.1)</i>	<i>Measurement of user satisfaction? (Y/N)</i>	<i>State to what extend these needs have been fulfilled in the users' eyes</i>	<i>Reference document on user satisfaction</i>
1-7	No		

**Table 3.1.3 Are the statistics provided to/ used by the users relevant?**

<i>User (from table 3.1.1)</i>	<i>Y/N</i>	<i>If Y or N, explain why.</i>
1-7	Yes	The relevance can only be assessed by indirect means. The EU-LFS is in a constant development, often driven by the requests of the Commission, mainly DG EMPL. 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 other users than the Commission, the absence of complaint, even in case of extensive uses of the statistics is indicative of relevancy.

**Table 3.1.4 Does the unit anticipate some changes for the future needs?**

<i>User (from table 3.1.1)</i>	<i>Y/N</i>	<i>If Y give a short description</i>
1,3	Yes	Introduction of 6 new variables in 2006
2,4,5,6	No	
7	Yes	Production of an anonymised micro-data set for research purposes.

### 3.2 Completeness

When the present regulation governing the EU-LFS<sup>7</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 Member States. Furthermore, the transitional period would take some time that was difficult to estimate at the time. 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. Germany, however, was in the meantime required to provide quarterly estimates for the main labour force aggregates.<sup>8</sup> As a result of this, the annual estimates for EU-25 in 2004 are based on the continuous survey for all Member States except Germany. For countries outside the EU-25 Switzerland conducted a labour force survey only in the spring of 2004, while Croatia had a semi-annual but not a continuous survey. For legal reasons Turkey has been unable to provide Eurostat with labour force survey micro data.

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 unwillingness 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 3.2.1 and 3.2.2 summarise the completeness data.

**Table 3.2.1 Completeness of the EU-LFS variables, 2004**

<i>Number of compulsory variables with 100% item non-response<sup>1</sup></i>	<i>Number of countries</i>	<i>EU-25</i>
0	10	10
1 - 4	11	10
5 - 9	6	5
10 -19	4	-
Total	31	25

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

<sup>7</sup> Council Regulation (EC) No 577/98.

<sup>8</sup> Regulation (EC) No 1991/2002 of the European Parliament and of the Council.

**Table 3.2.2 Compulsory EU-LFS variables having one or more country returning 100% non-response or constant value<sup>1</sup>, 2004**

Column number	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
4/5	Sequence number of spouse or cohabiting partner	4	2
6/7	Sequence number of father	4	2
8/9	Sequence number of mother	4	2
15	Date of birth in relation to the end of reference period	1	1
17/18	Nationality	1	1
19/20	Years of residence in this Member State	4	.
36/37	Country of place of work	4	3
38/39	Region of place of work	8	6
40/43	Year in which person started working for this employer or as self-employed	1	.
48	Total duration of temporary job or work contract of limited duration	2	1
53/54	Main reason for hours actually worked during the reference week being different from the person's usual hours	1	.
56/57	Number of hours that the person would like to work in total	1	1
58	Working at home	3	1
59	Looking for another job and reasons for doing so	1	.
66	Existence of previous employment experience	1	.
74	Professional status in last job	1	1
77/79	Occupation of last job	3	2
82	Type of employment sought	2	1
85	Contacted private employment agency to find work	1	.
88	Inserted or answered advertisements in newspapers or journals	1	.
90	Took a test, interview or examination	3	1
91	Looked for land, premises or equipment	1	.
92	Looked for permits, licences, financial resources	4	2
93	Awaiting the results of an application for a job	4	3
94	Waiting for a call from a public employment office	8	4
95	Awaiting the results of a competition for recruitment to the public sector	14	9
96	Other method used	3	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	2	1
112/115	Year when highest level of education or training was successfully completed	4	3
116	Situation with regard to activity one year before survey	2	1
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	5	1
122/123	Region of residence (within Member State) one year before survey	5	1
170/171	Interview week	2	1
174/175	Region of household	1	.
176	Degree of urbanisation	10	5
197/202	Quarterly weighting factor of the sample for household characteristics ( in the case of a sample of individuals)	4	1
203	Sequence number of the survey wave	5	4

**Table 3.2.2 Compulsory EU-LFS variables having one or more country returning 100% non-response or constant value<sup>1</sup>, 2004**

Column number	Brief description	Number of countries	EU-25
293	Student or apprentice in regular education during the last 4 weeks	1	.
294	Level of this education or training	3	1
298	Did you attend any courses, seminars, conferences or received private lessons or instructions outside the regular education system (hereafter mentioned as taught learning activities) within the last 4 weeks	1	.
299/301	Number of hours spent on all taught learning activities within the last 4 weeks	3	2
309/311	Field of highest level of education or training successfully completed	3	2

<sup>1</sup> Excluding variables which are constant by default such as country, reference year, reference week (Germany) and type of household

## 4 Accuracy

Accuracy in the general statistical sense denotes the closeness of computations or estimates to the exact or true values. Statistics are not equal with the true values because of variability (the statistics change from implementation to implementation of the survey due to random effects) and 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 Member States provide Eurostat with an estimate of the relative standard error of five main statistics. These statistics can also be expressed in confidence limits, i.e. the range of values that in 19 out of 20 times would capture the true value in the population. It is also relatively straightforward to provide similar statistics on the aggregate level.

Table 4.1.1 provides the estimates and confidence limits for the 2<sup>nd</sup> quarter 2004, while Table 4.1.2 provides estimates and confidence limits for the annual averages for 2004.

**Table 4.1.1 Confidence limits<sup>1</sup>, 2<sup>nd</sup> quarter 2004**

Country	Number of employed	Number of part-time employed	Number of unemployed	Rate of unemployment	Average number of hours usually worked per week
	x1000	x1000	x1000	%	hours
<b>EU-25</b>	<b>193,702 ± 507</b>	<b>34,411 ± 254</b>	<b>19,461 ± 202</b>	<b>9.1 ± 0.1</b>	<b>37.9 ± 0.1</b>
<b>EU-15</b>	<b>164,812 ± 423</b>	<b>32,090 ± 242</b>	<b>14,636 ± 164</b>	<b>8.2 ± 0.1</b>	<b>37.4 ± 0.1</b>
<b>Euro-zone</b>	<b>129,831 ± 401</b>	<b>23,146 ± 215</b>	<b>12,836 ± 155</b>	<b>9.0 ± 0.1</b>	<b>37.5 ± 0.1</b>
<b>EEA</b>	<b>196,131 ± 507</b>	<b>35,116 ± 254</b>	<b>19,569 ± 202</b>	<b>9.1 ± 0.1</b>	<b>37.9 ± 0.1</b>
BE	4,144 ± 64	897 ± 43	329 ± 31	7.4 ± 0.8	36.9 ± 0.5
CZ	4,682 ± 39	235 ± 12	419 ± 16	-	42.0 ± 0.1
DK	2,742 ± 26	614 ± 23	151 ± 11	5.2 ± 0.5	35.6 ± 0.6
DE	35,463 ± 258	7,920 ± 98	4,261 ± 79	10.7 ± 0.2	36.0 ± 0.1
EE	595 ± 28	47 ± 8	66 ± 11	10.0 ± 1.6	40.1 ± 0.6
EL	4,331 ± 76	201 ± 13	493 ± 22	10.2 ± 0.4	43.0 ± 0.2
ES	17,866 ± 109	1,585 ± 59	2,227 ± 64	11.1 ± 0.3	39.6 ± 0.2
FR	24,215 ± 199	4,027 ± 150	2,300 ± 95	8.7 ± 0.4	37.9 ± 0.2
IE	1,836 ± 18	311 ± 12	86 ± 5	4.5 ± 0.4	-
IT	22,438 ± 154	2,843 ± 60	1,923 ± 50	7.9 ± 0.2	-
CY	336 ± 9	29 ± 3	15 ± 2	4.3 ± 0.6	40.6 ± 0.4
LV	1,021 ± 24	108 ± 18	112 ± 13	9.9 ± 1.1	41.3 ± 0.8
LT	1,437 ± 44	124 ± 14	184 ± 17	11.3 ± 1.0	38.1 ± 0.3
LU	186 ± 3	33 ± 1	9 ± 1	4.8 ± 0.5	37.4 ± 0.6
HU	3,894 ± 55	179 ± 12	241 ± 13	5.8 ± 0.3	40.5 ± 0.1
MT	146 ± 5	12 ± 2	11 ± 2	7.2 ± 1.1	40.1 ± 0.6
NL	8,101 ± 87	3,693 ± 66	395 ± 19	4.7 ± 0.3	-
AT	3,742 ± 44	750 ± 22	190 ± 15	4.8 ± 0.4	39.5 ± 0.4
PL	13,682 ± 268	1,440 ± 73	3,225 ± 114	19.1 ± 0.6	-
PT	5,125 ± 50	573 ± 30	347 ± 22	6.4 ± 0.4	39.3 ± 0.3
SI	946 ± 17	90 ± 6	60 ± 5	6.0 ± 0.5	40.6 ± 0.3
SK	2,149 ± 21	58 ± 6	491 ± 17	18.6 ± 0.8	40.7 ± 0.2
FI	2,384 ± 5	313 ± 11	275 ± 9	10.4 ± 0.4	37.9 ± 0.2
SE	4,311 ± 17	1,026 ± 18	309 ± 9	6.7 ± 0.2	36.4 ± 0.3
UK	27,929 ± 126	7,304 ± 105	1,341 ± 51	4.6 ± 0.2	± -
BG	2,970 ± 67	85 ± 12	406 ± 26	12.0 ± 0.7	41.3 ± 0.2
HR	1,583 ± 54	138 ± 18	251 ± 17	13.7 ± 0.9	40.9 ± 0.3
RO	9,283 ± 162	949 ± 99	777 ± 57	7.7 ± 0.6	40.9 ± 0.3
IS	-	-	-	-	-
NO	2,273 ± 14	674 ± 17	101 ± 7	4.3 ± 0.3	33.5 ± 0.5
CH	3,959 ± 28	1,308 ± 25	178 ± 10	4.3 ± 0.2	35.1 ± 0.3

<sup>1</sup> The confidence limits for the aggregates are preliminary and approximate.

**Table 4.1.2 Confidence limits<sup>1</sup>, Annual average 2004**

Country	Number of employed	Number of part-time employed	Number of unemployed	Rate of unemployment	Average number of hours usually worked per week
	x1000	x1000	x1000	%	hours
<b>EU-25</b>	<b>193,957 ± 435</b>	<b>34,354 ± 201</b>	<b>19,714 ± 167</b>	<b>9.2 ± 0.08</b>	<b>37.9 ± 0.05</b>
<b>EU-15</b>	<b>164,929 ± 371</b>	<b>31,988 ± 193</b>	<b>14,865 ± 142</b>	<b>8.3 ± 0.08</b>	<b>37.4 ± 0.06</b>
<b>Euro-zone</b>	<b>129,881 ± 354</b>	<b>23,137 ± 170</b>	<b>13,033 ± 135</b>	<b>9.1 ± 0.09</b>	<b>37.6 ± 0.05</b>
<b>EEA</b>	<b>196,378 ± 435</b>	<b>35,050 ± 201</b>	<b>19,818 ± 167</b>	<b>9.2 ± 0.07</b>	<b>37.9 ± 0.05</b>
BE	-	-	-	-	-
CZ	4,691 ± 30	230 ± 9	426 ± 13	8.3 0.3	42.0 ± 0.1
DK	2,738 ± 13	607 ± 12	160 ± 6	5.5 ± 0.2	35.5 ± 0.2
DE	35,463 ± 258	7,920 ± 98	4,261 ± 79	10.7 ± 0.2	36.0 ± 0.1
EE	596 ± 20	48 ± 6	64 ± 7	9.7 ± 1.0	39.9 ± 0.3
EL	-	-	-	-	-
ES	17,971 ± 77	1,572 ± 45	2,214 ± 48	11.0 ± 0.2	39.6 ± 0.1
FR	-	-	-	-	-
IE	-	-	-	-	-
IT	22,404 ± 97	2,841 ± 37	1,960 ± 31	8.1 ± 0.1	-
CY	338 ± 9	29 ± 3	17 ± 2	4.7 ± 0.6	40.6 ± 0.3
LV	1,018 ± 11	106 ± 7	118 ± 6	10.4 ± 0.5	41.1 ± 0.3
LT	1,433 ± 43	121 ± 14	184 ± 18	11.4 ± 1.0	38.1 ± 0.2
LU	186 ± 3	33 ± 1	9 ± 1	4.8 ± 0.5	37.4 ± 0.4
HU	3,900 ± 28	181 ± 8	252 ± 9	6.1 ± 0.2	40.4 ± 0.1
MT	148 ± 2	13 ± 1	11 ± 1	7.2 ± 0.6	39.7 ± 0.3
NL	8,106 ± 43	3,692 ± 32	387 ± 9	4.6 ± 0.1	-
AT	3,744 ± 34	751 ± 18	195 ± 10	4.9 ± 0.3	39.6 ± 0.3
PL	13,794 ± 216	1,494 ± 51	3,230 ± 82	19.0 ± 0.4	-
PT	5,123 ± 50	579 ± 30	365 ± 19	6.7 ± 0.4	39.2 ± 0.2
SI	943 ± 13	88 ± 4	63 ± 4	6.3 ± 0.4	40.7 ± 0.2
SK	2,168 ± 17	58 ± 5	483 ± 13	18.2 ± 0.6	40.7 ± 0.1
FI	2,365 ± 19	320 ± 11	229 ± 6	8.8 ± 0.3	37.8 ± 0.2
SE	4,290 ± 14	1,011 ± 15	299 ± 6	6.5 ± 0.2	36.4 ± 0.1
UK	-	-	-	-	-
BG	2,923 ± 50	65 ± 6	400 ± 21	12.0 ± 0.6	41.0 ± 0.1
HR	1,563 ± 43	132 ± 15	247 ± 13	13.6 ± 0.7	40.8 ± 0.2
RO	9,103 ± 164	968 ± 105	800 ± 59	8.1 ± 0.6	40.8 ± 0.3
IS	-	-	-	-	-
NO	-	-	-	-	-
CH	3,959 ± 28	1,308 ± 25	178 ± 10	4.3 ± 0.2	35.1 ± 0.2

<sup>1</sup> The confidence limits for the aggregates are preliminary and approximate.

## 4.2 Non-sampling errors

### 4.2.1 Coverage errors

The *frame* is a device that permits access to population units. *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 4.2.1 Frame quality, coverage rates and methodological notes**

Country	Under-coverage	Over-coverage	Misclassification	Comments
BE				
CZ	-	-	-	Not existing or vacant dwellings in the Register of Census Areas causes overcoverage. Foreigners live prevalingly in collective households and the data for this population based on LFS are not representative for this group.
DK	→ 0	→ 0	→ 0	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. CPR is not allowed to transmit any information concerning the potential active status or dwelling address for persons who have used this right (mainly people who have recently changed there residence).
DE	-	-	-	
EE	-	-	-	1% of total number of sampled households not interviewed due to an error or inaccuracy of the frame (person emigrated or left the county, person deceased, wrong address, etc).
EL				
ES	-	-	-	
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.
IE	-	-	-	
IT		1.14	1.08	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.

**Table 4.2.1 Frame quality, coverage rates and methodological notes**

CY	2%	-	-	In a post enumeration survey conducted after the 2001 census an undercoverage of 2,0% was estimated. The selected PSUs were again enumerated completely in 2004. 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 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	-	1.52	-	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	-	1.00	-	The sampling frame (population register) is the total population database. Population register database is updated regularly
LU	-	0.83	-	Some households of the sampling frame RGPP were out of scope - 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.
HU	-	-	-	Misclassification in the list of addresses from the Census occurs but has in practice no impact on the LFS, while the undercoverage is probably inherited by the survey. Another type of coverage error comes from the fact that, the target population of the LFS is the non-institutional resident population, but the list of addresses does not contain the information to distinguish individuals belonging to resident population from those who do not belong to that category. As a consequence, an individual living in a sampled dwelling and not belonging to the resident population may be interviewed on his/her status on the labour market, producing thereby an instance of overcoverage. (Note that the LFS questionnaire has no question on the category resident – non-resident population).
MT	-	-	-	The survey covers private households. The LFS survey is taken from the water services corporation database, which includes both Maltese citizens and foreigners who are residing in Malta. Children or any other members who are living in another dwelling or institution are excluded.
NL	-	-	-	
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	-	10.84	-	The overcoverage consists of ineligible sampling units, simple average of 4 quarters
SI	→ 0	→ 0	→ 0	The frame is Central population register. Better would be household register but there isn't any.

**Table 4.2.1 Frame quality, coverage rates and methodological notes**

SK	-	-	→ 0	<p>There is lack of information on new statistical units between Censuses. Errors with regard to addresses of dwellings; missing coverage of collective households, persons living in convents, partially student halls of residence (although they are surveyed via other members of the households), members of the Slovak embassies and institutions abroad.</p> <p>There are not any additional micro-censuses to update the list of dwellings; the under-coverage may include also the people born abroad and living in collective houses</p> <p>By substituting the over-coverage of the statistical units is minimised; there is an assumption that mainly young residents working temporarily abroad will stay to live there</p>
FI	→ 0	1.6	-	<p>Overcoverage: mostly emigration in wave 1, deaths and emigration for later waves.</p> <p>Undercoverage fairly small (no large-scale immigration)</p>
SE	1	0.2	-	<p>The LFS sample is drawn once a year and the sampled persons are interviewed eight times during a two year period. No additional sample selection is made in order to update the sample with immigrants during this two-year period. The average time span between sample selection and the reference week is about 19 months. which means an under-coverage of about 50,000 persons. This under-coverage is judged to have marginal effects on the LFS-estimates.</p> <p>There is a certain over coverage in RTB and consequently in the sampling frame. The over coverage consists of people born abroad who left Sweden without reporting this to the Swedish authorities. When these persons is included in the sample there are no information that they have moved out from Sweden. They can not be reached for interview and will be classified as non-response. The over-coverage is mainly concentrated to non-Nordic immigrants and is of a magnitude of 25,000-50,000 persons in the total population</p>
UK	-	-	-	<p>The LFS does not include residents in communal establishments, constituting just over 1% of the total GB population.</p>
BG	-	6.45	-	<p>During the survey field work problems are found on:</p> <ul style="list-style-type: none"> <li>- non-occupied houses or houses used for other purposes</li> <li>- one household (according to the Census list) divided into two or more separate households or the opposite.</li> </ul>
HR	-	-	-	<p>Starting from the first half-year 2002, the sample frame for the LFS is based on the Census 2001 data. This sample frame includes addresses of private households on the whole territory of Croatia; hence the LFS results relate to the whole country. As the Census database was not updated since 2001, it is becoming obsolete, and some problems regarding migration and/or newly built dwellings can be foreseen for the coming years. 7.89% of selected dwelling units are non-eligible (i.e. blanks: non-existing or out of scope units).</p>

**Table 4.2.1 Frame quality, coverage rates and methodological notes**

RO	0.69	1.03	-	<p>Due to the lack of appropriate information, the new dwellings, built after 2002 Census of the Population and Dwellings, that could possibly constitute a sampling frame of the new dwellings, have not been taken into account. Nevertheless, some periodic updates have to be done for the PSU included in EMZOT, on the basis of the household surveys conducted, as well as micro-census type surveys. The micro-census has aimed in particular the updating of the addresses of the dwellings.</p> <p>Under-coverage rate is estimated as the ratio between number of dwellings built in 2003 to number of dwellings at the end of 2003 year.</p> <p>Possible misclassification errors could occur only if a certain locality comprising PSU included into master sample would change its area. Changes in the area of the localities (usually from rural to urban) are rare cases. Even if it that would happen, the misclassification errors could be corrected by calibration.</p>
IS	-	-	-	No significant problems
NO	-	-	-	No significant problems.
CH	-	-	-	<p><i>Standard-sample:</i></p> <p>The base used for the standard sample are the registered phone numbers which covers until now more than 90% of the Swiss population. The problem for the next years will be the decreasing factor of this coverage. The reasons are households which do not register her (fix-) phone number and households which can only be contacted by a mobile phone number.</p> <p><i>Extra-sample of foreign persons:</i></p> <p>As the extra sample is based on the register of foreign persons, the quality (including recent immigration) is almost "perfect". The register has a monthly update</p>

#### 4.2.2 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 4.2.2 Share of proxy interviews, number of interviews per interviewer and last update of the questionnaire**

Country	% of proxy interviews <sup>1</sup>	Number of interviews <sup>1</sup> per interviewer (per quarter)	Date of the last update of the questionnaire	Date of the last pilot survey in order to test the questionnaire	Number of respondents to the pilot survey
BE	24.8	69	-	-	-
CZ	48.3	436	11 November 2004	2001	891
DK	2.8	270	Every quarter, Sept. 2004	-	-
DE	28.3	35	yearly	2000	11000 households
EE	11.7	60	Jan-2004	Nov-Dec 2002	507
GR	43.3	104	-	-	-
ES <sup>2</sup>	58.2	602	1999	1996	1101 households
FR	33.3	101	2nd quarter of 2004	2001	NR
IE	39.8	-	-	-	-
IT	36.1	140	Oct 2003	Nov 2003	850
CY	32.3	704	Jan 2003	Feb 2003	30
LV	42.7	117	Jan 2004 (minor changes)	N	N
LT	45.5	73	1st quarter of 2004	Q4 2003	40
LU	52.1	499	Yearly	NA	NA
HU	43.2	-	Oct 2003	Aug 2003	About 500
MT	47.8	69	Annually	-	-
NL	46.9	277	-	-	-
AT	42.8	166	Quarterly, if necessary	-	N.A.
PL	40.5	54	Q1 2004	-	-
PT	46.0	226	2004	No pilot test	NA
SI	57.0	390	Jan 2004	-	-
SK	61.7	442	2003	1992	-
FI	8.7	202	Jan 2004	-	-
SE	2.9	246	Yearly	Normally small changes not tested	-
UK <sup>2</sup>	33.6	137	Mar 2004	October 2003	379 households, 999 individuals
BG	41.9	63	Q1 2004	2002	18000
HR	37.3	134	2004	-	-
RO	28.6	70	for the 2004 LFS	Jun 2003	100 households
IS <sup>2</sup>	1.1	94	Jan 2003	November and December 2002	-
NO <sup>2</sup>	13.4	143	Q1 2003	1995	-
CH	0.4	122	Apr 2003	Feb 2004	200

<sup>1</sup> 15-74 years respondents

<sup>2</sup> 16-74 years respondents

### 4.2.3 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**. These errors are in essence similar to measurement error.

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

### 4.2.4 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**.

**Table 4.2.4.1 Rates of non response by wave. Annual average 2004**

Country	Waves							
	1	2	3	4	5	6	7	8
BE	-	-						
CZ	21.3	18.9	19.2	20.1	21.8			
DK	34.2	34.7	36.7					
DE	-	-	-	-				
EE	34.0	27.7	24.3	23.3				
EL	-	-	-	-	-	-		
ES	15.2	7.7	7.2	7.6	7.4	7.5		
FR	19.1	17.8	17.9	18.3	19.4	16.2		
IE	-	-	-	-	-			
IT	18.5	8.2	7.4	6.7				
CY	-	-	-	-	-	-		
LV	19.4	14.8	12.8					
LT	13.6	11.6	9.9	9.4				
LU	-	-						
HU	23.4	16.6	10.4	8.5	7.7	7.1		
MT	18.1	26.0						
NL	-	-	-	-	-			
AT	-	-	-	-	-			
PL	21.9	21.1	18.3	17.9				
PT	-	-	-	-	-	-		
SI	15.3	6.8						
SK	10.8	-	-	-	-			
FI	16.5	14.9	15.4	16.4	16.4			
SE	20.6	17.4	16.3	16.1	16.2	15.7	15.7	14.9
UK	26.0	35.0	37.0	40.0	41.0			
BG	21.6	15.8	14.2	12.3				
HR								
RO	6.2	4.4	5.3	4.3				
IS	18.3	17.8	18.6	20.3	18.5			
NO	12.8	10.0	10.1	10.1	10.8	11.3	11.6	11.3
CH	29.4	16.7	12.5	11.4	10.0			

**Table 4.2.4.2 Divisions of non-response into categories. 2<sup>nd</sup> quarter 2004**

Country	Non-response (%)			
	Total	Refusals	Non-contacts	Other reasons
BE	24.5	1.6	14.0	8.9
CZ	20.2	15.4	4.3	0.5
DK	33.6	-	-	-
DE	-	-	-	-
EE	28.4	5.6	20.4	2.4
EL	9.5	2.9	6.6	0.0
ES	8.0	3.6	4.4	0.0
FR	17.7	4.2	9.6	3.9
IE	-	-	-	-
IT	11.7	3.7	4.2	3.8
CY	1.0	0.7	0.2	0.1
LV	16.0	6.6	7.5	1.9
LT	11.1	2.3	8.5	0.3
LU	66.6	15.0	11.1	40.5
HU	12.0	3.7	6.4	2.0
MT	21.8	3.9	17.8	-
NL	-	-	-	-
AT	21.1	0.8	20.3	-
PL	19.8	11.3	6.6	1.9
PT	10.6	1.3	7.4	1.8
SI	14.6	9.8	2.9	2.3
SK	7.7	6.2	0.6	0.9
FI	16.3	10.5	5.6	0.3
SE	16.4	6.9	9.0	0.4
UK <sup>1</sup>	26.7	17.8	9.0	-
BG	16.1	3.6	11.6	0.9
HR	15.0	5.4	4.7	4.9
RO	4.9	1.7	2.1	1.2
IS	19.3	8.4	6.8	4.0
NO	11.5	2.5	4.7	4.3
CH	20.3	6.7	9.2	4.4

<sup>1</sup> 1<sup>s</sup> wave only.

## 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 within twelve weeks from the end of a reference quarter for quarterly data, but within nine months from the end of the reference period when the survey is conducted only in the spring. The later date has been fixed as the 31 March the year after.

**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 2004 – quarterly LFS only<sup>1</sup>**

Number of countries

<i>First release nationally</i>	2003		2004	
	<i>All</i>	<i>All</i>	<i>EU-25</i>	<i>Euro-zone</i>
<i>Number of calendar days from end of reference period</i>				
<31	5	5	4	3
31-60	8	8	6	1
61-90	3	3	3	0
91+	8	10	9	5
Not known	2	1	1	1
<b>Total</b>	<b>26</b>	<b>27</b>	<b>23</b>	<b>10</b>
<i>Average number of calendar days</i>	<i>72</i>	<i>78</i>	<i>80</i>	<i>85</i>
<b>Transmission to Eurostat</b>				
<31	1	0	0	0
31-60	3	3	3	2
61-90	10	15	13	2
91+	12	9	7	6
<b>Total</b>	<b>26</b>	<b>27</b>	<b>23</b>	<b>10</b>
<i>Average number of calendar days</i>	<i>98<sup>2</sup></i>	<i>96</i>	<i>90</i>	<i>98</i>
<b>Eurostat's dissemination of national data</b>				
<31	0	0	0	0
31-60	1	1	1	1
61-90	3	4	3	1
91+	22	22	19	8
<b>Total</b>	<b>26</b>	<b>27</b>	<b>23</b>	<b>10</b>
<i>Average number of calendar days</i>	<i>121<sup>2</sup></i>	<i>116</i>	<i>110</i>	<i>120</i>

<sup>1</sup> I.e. not incl. Germany, Cyprus (in 2003), Luxembourg, Croatia and Switzerland

<sup>2</sup> Not incl. Iceland, which didn't transmit data until 2005.

The release of EU-LFS data is not bound by 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 2004 Eurostat started publishing the quarterly results in a special Statistics in Focus. Publication of the annual results was discontinued, but main results of 2004 published in Statistics in Focus.

In 2006 Eurostat published a compendium describing the main characteristics of the national surveys in 2004 ([Labour force survey in the EU, Candidate and EFTA countries: Main characteristics of the national surveys 2004](#)).

The Eurostat public website 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.

In October 2004, Eurostat opened the website data to the general public. In connection with the public access, all data were attached to meta-data in SDDS format, giving basic information on the background and 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.

## 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 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 major change was introduced in 2004 to the concepts or measurements in the EU-LFS.

In 2004 the final phase of introducing the continuous, quarterly survey continued. Malta, Austria and Italy switched to a continuous operation from the first quarter 2004, while Cyprus introduced the continuous quarterly survey from the second quarter. Germany implements the quarterly continuous survey in 2005.

**Table 7.1.1 Availability of micro-data from the EU-LFS<sup>1</sup>**

Country	2 <sup>nd</sup> 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 per 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	-	-	1983-2004: One week per quarter 2005+: Quarterly, continuous
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)

**Table 7.1.1 Availability of micro-data from the EU-LFS<sup>1</sup>**

Country	2 <sup>nd</sup> quarter micro-data available from	Quarterly micro-data available from	Reference week evenly spread over the quarter from	Remarks
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: One week per month 2000+: Monthly survey. Uniformly spread over the weeks of the month, months of each quarter have 4-4-5 weeks
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+: Most or all weeks of the quarter, not uniformly spread
IS	1995	2003	2003	1995-2002: One week per quarter
NO	1995	2000	1996	1995: One week per month
CH	1996	-	-	1995+: All or most weeks surveyed, not uniformly spread. 2007+: Quarterly, continuous planned

<sup>1</sup> The table reflects the actual data availability in the databases of Eurostat in May 2006. 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 7.1.2 Improvements or changes compared to previous year**

Country	Change	Impact of the changes on the statistics.
BE		
CZ	Attempt to identify NUTS2 when person works abroad or lived abroad one year ago	-
DK	None	
DE	The four questions, which define the labour status, comprise in 2004 explicit a further possibility of small jobs, called "Mini-Jobs".	
EE	None	
EL		
ES	Change in the population basis from census 1991. rev to census 2001. The nationality variable has been included in the re-weighting procedure in the regions (NUTS2) where the sample was sufficiently large.	A general increase of the absolute estimates. Also the activity and the unemployment rates increased because the foreign population have bigger rates. The period affected for the change is 1996-2004
FR	None	
IE	None	
IT	From 2003 to 2004 many changes occurred to the LFS: a new questionnaire has been developed, that is quite different to the previous one. Many changes have been introduced in order to satisfy exactly Eurostat's regulations; other changes have been introduced in order to collect more detailed information regarding the labour market.	A model based / macro revision has been run in order to offer consistent data over time, since IV quarter 1992 until IV quarter 2003. Series have been first decomposed in Cycle-trend, Seasonal and Erratic components, then each component has been revised obtaining global (all effect in one) parameters that have been calculated thanks to the results on a overlapping period ( I Q. 2003 - I Q. 2004) in which both the old and the new survey were run together. Revisions are available for a large set of indicators regarding employment and unemployment.
CY	None	
LV	We have changed reference period for the variable CourLen from one week to four weeks according to Commission Regulation (EC) 2104/2002, and collected on 3 digit	
LT	None	
LU	None	
HU	None	
MT	Since 2004, the LFS has started to be carried out on an ongoing basis and the reference weeks are evenly spread across the 13 weeks in the quarter. Hence, statistics in 2003 and 2004 are not comparable on a like with like basis. Columns 15, 87, 89 and 176 are now covered.	
NL	None	
AT	In 2004, Austria implemented the continuous Labour Force Survey. This meant changes in concepts but also in nearly all other aspects of the survey. Therefore comparability for nearly all variables with previous surveys is affected. In particular the 3-month threshold (start of working) for those not looking for work because having found already a job is now comprised in the questionnaire.	Studies on quality of the survey are still on the way which may lead to revisions in some variables delivered to Eurostat.

**Table 7.1.2 Improvements or changes compared to previous year**

Country	Change	Impact of the changes on the statistics.
	New education and training variables have been introduced (according to the Commission Regulation 2104/2002)	
PL	Information on ability of taking the job for persons who have already found a job which will start within a period of 3 months has become available and the definition of unemployment is in line with the EU recommendation.	
	Variables have been added to achieve greater conformity with the EU-LFS (cols. 17/18, 19/20, 21/22, 36/37, 38/39, 91 and 95), as well as other minor changes.	
PT	Education and training variables defined according to the Commission Regulation 2104/2002.	
SI	None	
SK	Expansion of codes for Country, regions and nationality. Code 22 in highest level of education changed to 31	
FI	None	
SE	None	
UK	Changes in geographical boundaries and new population totals for weighting	The changes in the geographical boundaries have no impact on the statistics, but the new weights ensure that the LFS data are now in line with ONS published employment estimates used in Press Release.
BG	Variables on relationships within the household	
HR	New variables on education and training included, or existing ones modified, as listed in the Annex of the Commission Regulation no. 2104/2002	
RO	The sample consists of 28,000 dwellings, instead of 18,000; no impact on concepts and definitions, but an increased data reliability. New variables on education and training, citizenship and years of residence in the Romania, economic activity of the local unit at 3 digit level	
IS	None	
NO	None	
CH	Education variables on request of Eurostat	

## 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 Member States. 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 Member States 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.

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

<sup>10</sup> Commission Regulation (EC) No. 1575/2000.

<sup>11</sup> The European Union Labour Force Survey. Methods and definitions – 2001.

<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 Member States participated in the 2001 Census round. New censuses often result in new weights, new sample frames or new sample designs. By 2004 all of the Member States 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 also to particular dates, such as the population at 1 January or at mid-year. The EU-LFS statistics are in the main referring to the population over the whole year.

**Table 8.1.1 Coherence with population statistics 2004**

Country	Population 1/1/2004			LFS annual average 2004			Relative difference $[(L-P)/P*100]$		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
BE	10,396.4	5,087.2	5,309.2	10,395.7	5,085.7	5,309.9	0.0	0.0	0.0
CZ	10,211.5	4,974.7	5,236.7	10,195.5	4,958.7	5,236.8	-0.2	-0.3	0.0
DK	5,397.6	2,670.1	2,727.5	5,379.0	2,662.2	2,716.9	-0.3	-0.3	-0.4
DE	82,531.7	40,356.0	42,175.7	81,589.1	39,947.4	41,641.7	-1.1	-1.0	-1.3
EE	1,351.1	622.5	728.6	1,348.4	619.0	729.3	-0.2	-0.6	0.1
GR	11,040.7	5,464.4	5,576.2	10,616.2	5,207.4	5,408.8	-3.8	-4.7	-3.0
ES	42,345.3	20,802.0	21,543.4	42,440.2	20,893.7	21,546.5	0.2	0.4	0.0
FR	60,200.0	29,250.4	30,949.6	58,850.1	28,564.2	30,285.9	-2.2	-2.3	-2.1
IE	4,027.7	2,002.8	2,025.0	4,059.2	2,018.3	2,040.9	0.8	0.8	0.8
IT	57,888.2	28,068.6	29,819.6	57,441.9	27,830.2	29,611.8	-0.8	-0.8	-0.7
CY	730.4	359.2	371.1	713.5	346.7	366.8	-2.3	-3.5	-1.2
LV	2,319.2	1,068.3	1,250.9	2,318.9	1,068.0	1,250.9	0.0	0.0	0.0
LT	3,445.9	1,608.7	1,837.2	3,433.5	1,601.4	1,832.1	-0.4	-0.5	-0.3
LU	451.6	223.0	228.6	445.6	221.1	224.4	-1.3	-0.9	-1.8
HU	10,116.7	4,804.1	5,312.6	9,944.2	4,703.3	5,240.9	-1.7	-2.1	-1.4
MT	399.9	198.1	201.8	400.0	198.0	202.0	0.0	0.0	0.1
NL	16,258.0	8,045.9	8,212.1	16,118.7	8,011.6	8,107.0	-0.9	-0.4	-1.3
AT	8,140.1	3,949.8	4,190.3	8,045.0	3,898.3	4,146.7	-1.2	-1.3	-1.0
PL	38,190.6	18,486.4	19,704.2	37,601.3	18,138.8	19,461.2	-1.5	-1.9	-1.2

**Table 8.1.1 Coherence with population statistics 2004**

Country	Population 1/1/2004			LFS annual average 2004			Relative difference $[(L-P)/P*100]$		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
PT	10,474.7	5,066.3	5,408.4	10,503.8	5,082.7	5,421.1	0.3	0.3	0.2
SI	1,996.4	976.8	1,019.6	1,996.7	976.7	1,020.0	0.0	0.0	0.0
SK	5,380.1	2,611.1	2,768.9	5,369.5	2,601.1	2,768.4	-0.2	-0.4	0.0
FI	5,219.7	2,552.9	2,666.8	5,205.1	2,535.9	2,669.2	-0.3	-0.7	0.1
SE	8,975.7	4,446.7	4,529.0	9,005.9	4,462.6	4,543.3	0.3	0.4	0.3
UK	59,699.8	29,193.0	30,506.8	58,284.6	28,404.6	29,880.1	-2.4	-2.7	-2.1
BG	7,801.3	3,790.8	4,010.4	7,785.5	3,775.1	4,010.4	-0.2	-0.4	0.0
HR	4,441.8	2,137.7	2,304.1	4,215.4	2,012.1	2,203.3	-5.1	-5.9	-4.4
RO	21,711.3	10,591.8	11,119.4	21,637.9	10,527.3	11,110.6	-0.3	-0.6	-0.1
IS <sup>1</sup>	204.3	102.8	101.5	199.2	100.0	99.2	-2.5	-2.7	-2.3
NO <sup>1</sup>	3,254.5	1,639.6	1,614.9	3,273.3	1,646.0	1,627.3	0.6	0.4	0.8

Note: Population figures in italics are estimates or preliminary figures.

<sup>1</sup> The age group 16-74 years.

Source: Eurostat website, 7/6/2006

## 8.2. Coherence with other employment estimates

Key concepts used in National Accounts, such as full-time equivalency, 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).<sup>13</sup> Other differences can be listed, such as differences in coverage, where the EU-LFS covers the age groups 15 and older in private households, while the national accounts cover all persons regardless of age or residence. Other differences are also important, such as difference in the reference period. The LFS represent one average week in the year, when data are derived from administrative sources or establishment surveys the reference period is usually different, the month or even the whole year.

Due to this the employment estimates, using LFS data, usually lie somewhat below the estimates of employment for the purposes of national accounts, as shown by table 8.2.1. In some cases, however, the opposite may be true.

**Table 8.2.1 Employment 2004 in two different datasets on the Eurostat website**

x1000	National accounts <sup>1</sup>	Labour force survey <sup>2</sup>		
	Total	Total	Men	Women
<b>EU-25</b>	<b>200,309</b>	<b>194,138</b>	<b>108,679</b>	<b>85,460</b>
BE	4,217	4,139	2,354	1,785
CZ	4,726	4,691	2,647	2,044
DK	2,748	2,738	1,464	1,274
DE	38,782	35,463	19,508	15,955
EE	598	596	299	296
GR	3,996	4,313	2,671	1,642
ES	18,245	17,971	10,934	7,036
FR	24,963	24,381	13,174	11,207
IE	1,870	1,865	1,080	785
IT	24,232	22,405	13,622	8,783

<sup>13</sup> At the moment, the EU-LFS does not produce statistics on annual hours worked, which have direct correspondence with similar statistics in National Accounts.

**Table 8.2.1 Employment 2004 in two different datasets on the Eurostat website**

x1000	National accounts <sup>1</sup>	Labour force survey <sup>2</sup>		
	Total	Total	Men	Women
CY	357	340	192	147
LV	1,008	1,018	522	497
LT	1,441	1,433	732	701
LU	196	188	111	77
HU	3,879	3,900	2,117	1,783
MT	150	148	104	45
NL	8,140	8,106	4,514	3,593
AT	3,908	3,744	2,062	1,682
PL	13,795	13,794	7,565	6,229
PT	5,020	5,123	2,784	2,339
SI	914	944	514	430
SK	2,170	2,168	1,191	977
FI	2,370	2,365	1,229	1,136
SE	4,307	4,290	2,234	2,056
UK	28,230	28,020	15,057	12,963
BG	3,213	2,923	1,550	1,373
HR	1,562	1,563	867	697
RO	8,429	9,103	4,926	4,178
IS	156	155	82	73
NO	2,296	2,267	1,192	1,075

Source: Eurostat Free Data 24 May 2006.

Notes: The LFS estimates are the average of the quarterly totals except Germany where the estimates refer to the second quarter and Cyprus where the estimates refer to the average of the 4 quarters starting with the 2<sup>nd</sup> quarter 2004. Numbers in italics are forecasted values.

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

<sup>2</sup> Population and social conditions/Labour market/Employment and unemployment (Labour Force Survey/LFS Series/Employment – LFS Series/Employment by sex, age groups and nationality (1000))

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 8.2.2 compares the data on employment growth until 2004. The data sources are the EU-LFS and national accounts (ESA) data. The data is analysed in terms of the importance of the LFS in the production of the National accounts data on employment growth.

The results show that both sources are broadly comparable with relation to the direction of the employment growth. If the ESA data are not predominantly based on the LFS, the differences are mostly marked in the levels of the growth figures, and in 2003 and 2004 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. It can, however, be pointed out that LFS estimates are subject to sampling error, both with regard to levels and changes between periods (cf. Table. 4.1.2). 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 8.2.2 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.	<b>Italy*(2004)</b> , <b>Germany*(2004)</b>	
3c	Countries giving preponderance to labour-demand sources (i.e. employment registers and/or enterprise surveys)	<b>Denmark</b>	Malta Austria
4.	Countries not using LFS, or making minimal use of it	<b>Czech Republic* (2003)</b> , <b>France*(2003)</b> the <b>Netherlands*(2004)</b>	Belgium, Iceland, Poland and Slovenia

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

Legend:

Countries in **bold font** - the trend in the LFS & NA growth is comparable, however the levels of the growth figures are not consistent. The asterisk (\*) 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 tend 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-2 level. For the purposes of regional statistics, as well as monitoring for the Structural Funds, the D2 unit needs not only NUTS-2 data but may also require NUTS-3 data.

Depending on the available information in the Member States, the NUTS-3 unemployment compilations methods differ for the different Member States. 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-3 labour market figures is the EU-LFS NUTS-2 results. The EU-LFS NUTS-2 data (economically active population and unemployed persons) are distributed to NUTS-3 either according to the distribution of LFS NUTS-3 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 high impossible to assess the accuracy for NUTS-3 level according to scientific standards. Because of that some countries were not able to provide coefficients of variation (CV) at NUTS-3 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-3 compilation of unemployment

For a limited number of countries the NUTS-3 compilation of unemployment is based on registers or a combination of registers and LFS. These are Belgium, Denmark, Estonia, France, Germany, Austria, Portugal, Slovenia, Sweden and Romania. For all other Member States and Bulgaria the NUTS-3 data are derived from the national LFS.

Denmark, Estonia, Cyprus, Luxembourg, Malta, Latvia, Lithuania, Slovenia and Iceland comprise a single NUTS-2 region, i.e. national data represent NUTS-2 results (as well as NUTS-1 results).

Luxembourg and Cyprus comprise a single NUTS-3 region, i.e. national data represent NUTS-3 results (as well as NUTS-1 and NUTS-2 results).

Norway provides Eurostat with labour force data on NUTS-3 level but no other EFTA country.

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

Unemployment data (absolute levels) for Portugal at NUTS-3 were for the first time published by Eurostat in 2004. Data on the economically active population and unemployment rates at NUTS-3 level will be published in September 2006.

The annual average of unemployment by NUTS-3 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-2 level as found by the LFS to NUTS-3 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-3 are based solely on the structure (distribution) of register data.

## 9.3 Coefficient of variation at NUTS-2 and NUTS-3 for the rate of unemployment

Table 9.3.1 gives a summary of the coefficients of variation for the rate of unemployment. Only the lowest and the highest coefficients are shown.

**Table 9.3.1 Coefficient of variation (CV) for the rate of unemployment, 2004**

Countries	CV of regional (NUTS-2) annual aggregates in percentage		CV of regional (NUTS-3) annual aggregates in percentage	
	Lowest	Highest	Lowest	Highest
BE			-	-
CZ	3.5	8.3	3.5	8.3
DK	-	-	-	-
DE	3.6	10.2	-	-
EE	-	-	8.7	12.3
EL				
ES	2.0	10.7	3.2	18.4
FR			-	-
IE			5.9	13.5
IT	1.8	8.4		
CY	-	-	-	-
LV	-	-	4.6	8.5
LT	-	-	9.0	24.6
LU	-	-	-	-
HU	3.7	6.3	7.0	13.9
MT	-	-	4.1	14.4
NL	3.2	11.1	5.4	23.7
AT	5.2	7.7	-	-

PL	3.5	6.9	4.0	12.7
PT	4.2	15.5		
SI	-	-		
SK	2.3	12.0	2.9	12.0
FI	2.8	26.1	4.1	26.1
SE	2.8	6.5	3.2	16.0
UK	3.4	11.7		
BG	4.1	7.8	5.4	22.0
HR	4.4	5.7	6.0	39.3
RO	8.4	13.2		
IS	-	-	-	-
NO	5.3	8.6	-	-
CH	5.6	9.7	-	-

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-3 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-2 level of aggregation, provide the population of the region in question exceeds 300,000. The coefficients of variations given in table 9.3.1 are nevertheless provided for regions which have small populations and hence small sample sizes. In the EU-25, 22 out of 254 NUTS-2 regions have population less than 300,000. This will tend to inflate the CVs and the range of CVs.

As expected, the CVs for the NUTS-3 regions have broader and higher range than for the NUTS-2 regions. Of the sixteen countries providing data on NUTS-3 level, half of the countries have CVs less than 15% and further four countries with all the regional CVs less than 20%. When counting the regions, the picture is even better; two thirds of the 433 NUTS-3 regions for which data are available, have CV less than 15% and 78.3% less than 20%.

# Annex 1

## A. Item non-response in the EU-LFS (main data file) 2004 by country

(Extracted 1 February 2006 from the EU-LFS datasets)

See Explanatory notes at the end of the Annex.

			Q1	Q2	Q3	Q4		
BE	compulsory	Col_203	C	C	C	C		
	optional	Col_148/155	M	M	M	M		
CZ	compulsory	Col_294 <sup>1</sup>	M	M	M	M		
		Col_309/311 <sup>2</sup>	M	M	M	M		
	optional	Col_124/131	M	M	M	M		
		Col_132/139	M	M	M	M		
		Col_140/147	M	M	M	M		
		Col_148/155	M	M	M	M		
		Col_156/163	M	M	M	M		
		Col_302	M	M	M	M		
		Col_303/305	M	M	M	M		
		Col_306	M	M	M	M		
DK	compulsory	Col_001/2	M	M	M	M		
		Col_095	C	.	.	.		
		Col_170/171 <sup>3</sup>	M	M	M	M		
	optional	Col_124/131	M	M	M	M		
		Col_132/139	M	M	M	M		
		Col_140/147	M	M	M	M		
		Col_148/155	M	M	M	M		
		Col_156/163	M	M	M	M		
		DE	compulsory	Col_203 <sup>4</sup>		M		
			optional	Col_021/22		M		
Col_055				M				
Col_056/57				M				
Col_101				M				
Col_124/131				M				
Col_132/139				M				
Col_140/147				M				
Col_148/155				M				
Col_156/163				M				
Col_205		M						
Col_206		M						
Col_207		M						
Col_208		M						
Col_295/297		M						
Col_303/305		M						
Col_306		M						
EE	compulsory	Col_092	.	.	C	.		
		Col_095	C	C	.	C		
		Col_096	.	.	C	.		
		Col_176 <sup>5</sup>	C	C	C	C		
		optional	Col_132/139	M	M	M	M	
Col_148/155	.		M	M	M			
Col_156/163	M		M	M	M			
EL	compulsory	Col_036/37	C	C	C	C		
		Col_203	C	.	.	.		
ES	compulsory	Col_096 <sup>6</sup>	M	M	M	M		
		Col_299/301 <sup>7</sup>	M	M	M	M		
FR	optional	Col_101 <sup>8</sup>	M	M	M	M		
		Col_124/131	M	M	M	M		
		Col_132/139	M	M	M	M		
		Col_140/147	M	M	M	M		
		Col_148/155	M	M	M	M		
		Col_156/163	M	M	M	M		
		Col_204	.	.	M	M		
		Col_205	.	.	M	M		
		Col_206	.	.	M	M		
		Col_207	.	.	M	M		
		Col_208	.	.	M	M		
		Col_302	M	M	M	M		
		Col_303/305	M	M	M	M		
		Col_306	M	M	M	M		
		FR	compulsory	Col_077/79 <sup>9</sup>	M	M	M	M
Col_093 <sup>10</sup>	M			M	M	M		
Col_094 <sup>11</sup>	M			M	M	M		
Col_095 <sup>12</sup>	M			M	M	M		
Col_099 <sup>13</sup>	M			M	M	M		
Col_116	.			W	.	.		
Col_120/121	.			W	.	.		
Col_122/123	.			W	.	.		
Col_299/301 <sup>14</sup>	M			M	M	M		
optional	Col_116			W	.	W	W	
	Col_120/121			W	.	W	W	
	Col_122/123			W	.	W	W	
	Col_124/131			M	M	M	M	
	Col_132/139			M	M	M	M	
	Col_140/147			M	M	M	M	
	Col_148/155	M	M	M	M			
	Col_156/163	M	M	M	M			
IE	compulsory	Col_003	M	M	M	M		
		Col_074	M	M	M	M		
		Col_096	M	M	M	M		
		Col_099	M	M	M	M		
		Col_100	M	M	M	M		
		Col_116	.	M	.	.		
		optional	Col_116	M	.	M	M	
			Col_124/131	M	M	M	M	
			Col_132/139	M	M	M	M	
			Col_156/163	M	M	M	M	
Col_303/305	M	M	M	M				

<sup>1</sup> Planned for 2006

<sup>2</sup> Available since 2002 but not provided

<sup>3</sup> The interview week is not registered accurately for the mailed questionnaires.

<sup>4</sup> Each person is only asked once per year.

<sup>5</sup> Applied from 2005, possible for back-data (1997-2004)

<sup>6</sup> No 'other' active methods are registered

<sup>7</sup> Will be provided in 2005

<sup>8</sup> Will be provided in 2005

<sup>9</sup> Incompatible classification scheme in use in France

<sup>10</sup> All "waiting methods" are combined in one variable in the French Questionnaire.

<sup>11</sup> Ditto.

<sup>12</sup> Ditto.

<sup>13</sup> No such question in the French Questionnaire.

<sup>14</sup> As only the hours of the last course is asked for this would give false information for this variable.

			Q1	Q2	Q3	Q4
IT	compulsory	Col_004/5	.	M	.	.
		Col_006/7	.	M	.	.
		Col_008/9	.	M	.	.
		Col_017/18 <sup>15</sup>	M	M	M	M
	optional	Col_021/22	M	M	M	M
		Col_124/131	M	M	M	M
		Col_132/139	M	M	M	M
		Col_140/147	M	M	M	M
		Col_148/155	M	M	M	M
		Col_156/163	M	M	M	M
CY	compulsory	Col_036/37	.	.	C	C
		Col_038/39	.	.	C	C
	optional	Col_124/131	.	M	M	M
		Col_132/139	.	M	M	M
		Col_140/147	.	M	M	M
		Col_148/155	.	M	M	M
		Col_156/163	.	M	M	M
LV	compulsory	Col_038/39	.	C	.	C
	optional	Col_132/139	M	M	M	M
		Col_140/147	M	M	M	M
		Col_148/155	M	M	M	M
		Col_156/163	M	M	M	M
		Col_306	M	M	M	M
LT	compulsory	Col_038/39	.	C	C	C
		Col_092	.	C	.	.
	optional	Col_295/297	M	M	M	M
		Col_303/305	M	M	M	M
LU	compulsory	Col_203	M	M	M	M
	optional	Col_124/131	M	M	M	M
		Col_132/139	M	M	M	M
		Col_140/147	M	M	M	M
		Col_148/155	M	M	M	M
		Col_156/163	M	M	M	M
HU	optional	Col_132/139	M	M	M	M
		Col_140/147	M	M	M	M
		Col_148/155	M	M	M	M
		Col_156/163	M	M	M	M
		Col_306 <sup>16</sup>	M	M	M	M
MT	compulsory	Col_015	C	.	.	.
		Col_056/57 <sup>17</sup>	M	M	M	M
		Col_093	M	M	M	M
		Col_094	M	M	M	M
		Col_095 <sup>18</sup>	M	M	M	M
		Col_176 <sup>19</sup>	M	.	.	.
	optional	Col_132/139	M	M	M	M
		Col_148/155	M	M	M	M
		Col_156/163	M	M	M	M
		Col_295/297	M	M	M	M

			Q1	Q2	Q3	Q4		
NL	compulsory	Col_077/79	M	M	M	M		
		Col_093	C	C	C	C		
		Col_095	C	C	C	C		
		Col_116	.	W	.	.		
		Col_120/121	.	W	.	.		
		Col_122/123	.	W	.	.		
	optional	Col_116	W	.	W	W		
		Col_120/121	W	.	W	W		
		Col_122/123	W	.	W	W		
		Col_124/131	M	M	M	M		
		Col_132/139	M	M	M	M		
		Col_156/163	M	M	M	M		
		Col_204	W	W	W	W		
		Col_205	W	W	W	W		
		Col_206	W	W	W	W		
		Col_207	W	W	W	W		
AT	compulsory	Col_116	.	W	.	.		
	optional	Col_116	.	.	W	W		
		Col_124/131	M	M	M	M		
		Col_132/139	M	M	M	M		
		Col_140/147	M	M	M	M		
		Col_148/155	M	M	M	M		
		Col_156/163	M	M	M	M		
		Col_176	M	M	M	M		
		Col_094 <sup>20</sup>	M	M	M	M		
		Col_099 <sup>21</sup>	M	M	M	M		
Col_176	M	M	M	M				
PL	optional	Col_132/139	M	M	M	M		
		Col_140/147	M	M	M	M		
		Col_148/155	M	M	M	M		
		Col_156/163	M	M	M	M		
		Col_295/297	M	M	M	M		
		Col_095	C	.	.	.		
		PT	optional	Col_140/147	M	M	M	M
Col_148/155	M			M	M	M		
Col_156/163	M			M	M	M		
Col_205	M			M	M	M		
Col_295/297	M			M	M	M		
Col_302	M			M	M	M		
Col_303/305	M			M	M	M		
Col_306	M			M	M	M		
SI	compulsory			Col_038/39	C	C	.	C
				Col_095 <sup>22</sup>	M	M	M	M
		Col_120/121	.	M	.	.		
		Col_122/123	.	M	.	.		
		Col_176 <sup>23</sup>	M	M	M	M		
		Col_120/121	M	.	M	M		
	optional	Col_122/123	M	.	M	M		
		Col_124/131	M	M	M	M		
		Col_132/139	M	M	M	M		
		Col_140/147	M	M	M	M		
SK	optional	Col_148/155	M	M	M	M		
		Col_156/163	M	M	M	M		
		Col_295/297	M	M	M	M		
		Col_303/305	M	M	M	M		
		Col_306	C	C	C	C		
		Col_176 <sup>24</sup>	M	M	M	M		
		Col_124/131	M	M	M	M		
		Col_132/139	M	M	M	M		
		Col_140/147	M	M	M	M		
		Col_148/155	M	M	M	M		

<sup>15</sup> All records are blank as they have not been validated.

<sup>16</sup> Planned for 2005.

<sup>17</sup> Planned for 2005.

<sup>18</sup> Question not addressed in core LFS.

<sup>19</sup> Question introduced during the year.

<sup>20</sup> Planned for 2006.

<sup>21</sup> Planned for 2006.

<sup>22</sup> No such phenomenon in Slovenia.

<sup>23</sup> Planned for 2005.

<sup>24</sup> Absence of density of population data for some towns.

			Q1	Q2	Q3	Q4
FI	compulsory	Col_093	M	.	.	.
		Col_094	M	.	.	.
		Col_095	C	C	C	C
		Col_096	M	.	.	.
	optional	Col_116	M	.	M	M
		Col_120/121	M	.	M	M
		Col_122/123	M	.	M	M
		Col_124/131	M	M	M	M
		Col_132/139	M	M	M	M
		Col_140/147	M	M	M	M
		Col_148/155	M	M	M	M
		Col_156/163	M	M	M	M
		Col_303/305	M	M	M	M
		SE	compulsory	Col_001/2 <sup>25</sup>	C	C
Col_003 <sup>26</sup>	M			M	M	M
Col_004/5 <sup>27</sup>	M			M	M	M
Col_006/7 <sup>28</sup>	M			M	M	M
Col_008/9 <sup>29</sup>	M			M	M	M
Col_036/37	C			C	C	C
Col_038/39	C			C	C	C
Col_309/311	M			.	.	.
Col_312/315	.		.	M	.	
optional	Col_124/131		M	M	M	M
	Col_132/139		M	M	M	M
	Col_140/147		M	M	M	M
	Col_148/155		M	M	M	M
	Col_156/163		M	M	M	M
	Col_295/297	M	M	M	M	
Col_302	M	M	M	M		
Col_303/305	M	M	M	M		
Col_306	M	M	M	M		
UK	compulsory	Col_048	M	.	M	M
		Col_058	M	.	M	M
		Col_082	M	.	M	M
		Col_090	C	C	.	C
		Col_094	C	C	.	C
	Col_095	C	C	.	C	
	optional	Col_101	M	M	M	M
		Col_116	M	.	M	M
		Col_120/121	M	.	M	M
		Col_122/123	M	.	M	M
		Col_124/131	M	M	M	M
		Col_132/139	M	M	M	M
		Col_140/147	M	M	M	M
		Col_148/155	M	M	M	M
Col_156/163		M	M	M	M	
Col_204	M	.	M	M		
Col_205	M	.	M	M		
Col_206	M	.	M	M		
Col_207	M	.	M	M		
Col_208	M	.	M	M		

<sup>25</sup> Household data are being worked on and will be delivered end of 2005.

<sup>26</sup> Ditto.

<sup>27</sup> Ditto.

<sup>28</sup> Ditto.

<sup>29</sup> Ditto.

			Q1	Q2	Q3	Q4
BG	compulsory	Col_019/20 <sup>30</sup>	M	M	M	M
		Col_058 <sup>31</sup>	M	M	M	M
		Col_095 <sup>32</sup>	M	M	M	M
		Col_100 <sup>33</sup>	M	M	M	M
		Col_116 <sup>34</sup>	.	M	.	.
		Col_120/121 <sup>35</sup>	.	M	.	.
		Col_122/123 <sup>36</sup>	.	M	.	.
		Col_176	M	M	M	M
	optional	Col_021/22 <sup>37</sup>	M	M	M	M
		Col_101	M	M	M	M
		Col_116	M	.	M	M
		Col_120/121	M	.	M	M
		Col_122/123	M	.	M	M
		Col_124/131	M	M	M	M
		Col_132/139	M	M	M	M
		Col_156/163	M	M	M	M
		Col_204 <sup>38</sup>	M	.	M	M
Col_205 <sup>39</sup>	M	.	M	M		
Col_206 <sup>40</sup>	M	.	M	M		
Col_207 <sup>41</sup>	M	.	M	M		
Col_208 <sup>42</sup>	M	.	M	M		
Col_306	M	M	M	M		
HR	compulsory	Col_038/39		C		C
		Col_088 <sup>43</sup>		M		M
		Col_092 <sup>44</sup>		M		M
		Col_093 <sup>45</sup>		M		M
		Col_094 <sup>46</sup>		M		M
		Col_095 <sup>47</sup>		M		M
		Col_120/121		M		.
		Col_122/123		M		.
		Col_174/175 <sup>48</sup>		C		C
		Col_203 <sup>49</sup>		M		M
	Col_293 <sup>50</sup>		M		.	
	Col_298 <sup>51</sup>		M		.	
	Col_309/311 <sup>52</sup>		M		.	
	optional	Col_021/22 <sup>53</sup>		M		M
Col_120/121 <sup>54</sup>			.		M	
Col_122/123			.		M	
Col_132/139			M		M	
Col_140/147		M		M		
Col_148/155		M		M		
Col_156/163		M		M		
Col_303/305		.		M		

<sup>30</sup> Planned for 2006.

<sup>31</sup> Planned for 2006.

<sup>32</sup> Planned for 2006 (probably).

<sup>33</sup> Possibly harmonised in 2006.

<sup>34</sup> Possibly implemented in 2006 (structural variable).

<sup>35</sup> Ditto.

<sup>36</sup> Ditto.

<sup>37</sup> Planned for 2006.

<sup>38</sup> Planned for 2006 (structural variable).

<sup>39</sup> Ditto.

<sup>40</sup> Ditto.

<sup>41</sup> Ditto.

<sup>42</sup> Ditto.

<sup>43</sup> Plan to include this variable in the future.

<sup>44</sup> Ditto.

<sup>45</sup> Ditto.

<sup>46</sup> Ditto.

<sup>47</sup> In principle, competitions for recruitment in the public sector are not treated any different from other sectors' recruitment in Croatia

<sup>48</sup> NUTS 2 regions were recently defined and this variable will be provided in future.

<sup>49</sup> Not a panel survey design.

<sup>50</sup> Introduced in the second half-year.

<sup>51</sup> Ditto.

<sup>52</sup> Ditto.

<sup>53</sup> Plan to include this variable in the future.

<sup>54</sup> Plan to include this variable in the future.

			Q1	Q2	Q3	Q4						
RO	compulsory	Col_019/20 <sup>55</sup>	M	M	M	M	CH	compulsory	Col_001/2	C		
		Col_176 <sup>56</sup>	M	M	M	M			Col_003	M		
	optional	Col_124/131	M	M	M	M		Col_004/5	M			
		Col_132/139	M	M	M	M		Col_006/7	M			
		Col_140/147	M	M	M	M		Col_008/9	M			
		Col_148/155	M	M	M	M		Col_019/20	M			
		Col_156/163	M	M	M	M		Col_094	M			
	IS	compulsory	Col_003 <sup>57</sup>	.	.	C		C	Col_095	M		
			Col_004/5 <sup>58</sup>	M	M	M		M	Col_117	M		
			Col_006/7 <sup>59</sup>	M	M	M		M	Col_118/119	M		
Col_008/9 <sup>60</sup>			M	M	M	M	Col_120/121	M				
Col_019/20 <sup>61</sup>			M	M	M	M	Col_122/123	M				
Col_036/37			C	C	C	C	Col_176	M				
Col_038/39			C	C	C	C	Col_299/301	M				
Col_077/79			M	M	.	.	optional	Col_101	M			
Col_090			M	M	M	M		Col_132/139	M			
Col_094			M	M	M	M		Col_140/147	M			
Col_095		M	M	M	M	Col_148/155		M				
Col_120/121		.	M	.	.	Col_156/163		M				
Col_122/123		.	M	.	.	Col_295/297		M				
Col_176 <sup>62</sup>		M	M	M	M	Col_302		M				
Col_294 <sup>63</sup>		M	M	M	M	Col_303/305		M				
optional		Col_120/121	M	.	M	M		Col_306	M			
		Col_122/123	M	.	M	M						
		Col_124/131	M	M	M	M						
		Col_132/139	M	M	M	M						
		Col_140/147	M	M	M	M						
	Col_148/155	M	M	M	M							
	Col_156/163	M	M	M	M							
	Col_303/305	M	M	M	M							
	NO	compulsory	Col_003	M	M	M	M					
			Col_040/43	M	.	M	M					
Col_048			M	.	M	M						
Col_053/54			M	.	M	M						
Col_058			M	.	M	M						
Col_059			M	.	M	M						
Col_066			M	.	M	M						
Col_082			M	.	M	M						
Col_085			M	M	M	M						
Col_090			M	M	M	M						
Col_091			.	.	.	C						
Col_092			C	.	.	C						
Col_094			C	.	.	C						
Col_095			M	M	M	M						
Col_099			M	.	M	M						
Col_170/171			M	M	M	M						
Col_176			M	M	M	M						
Col_294			.	M	.	.						
Col_312/315			M	M	M	M						
optional			Col_116	M	.	M	M					
		Col_124/131	M	M	M	M						
		Col_132/139	M	M	M	M						
		Col_140/147	M	M	M	M						
		Col_148/155	M	M	M	M						
		Col_156/163	M	M	M	M						
		Col_204	M	.	M	M						
		Col_205	M	.	M	M						
		Col_206	M	.	M	M						
		Col_207	M	.	M	M						
Col_208		M	.	M	M							
Col_295/297	M	.	M	M								

<sup>55</sup> Included experimentally in 2004. Included from 2005.

<sup>56</sup> Implemented experimentally in 2005.

<sup>57</sup> Household part of survey not available.

<sup>58</sup> Ditto.

<sup>59</sup> Ditto.

<sup>60</sup> Ditto.

<sup>61</sup> Needs to be calculated based on information from the national register.

<sup>62</sup> Needs to be calculated based on information from the national register.

<sup>63</sup> Coding problems

## B. Item non-response in the EU-LFS 2004 (household sub-sample) by country

(Extracted 1 February 2006 from the EU-LFS datasets)

			Q1	Q2	Q3	Q4				Q1	Q2	Q3	Q4	
DK	compulsory	Col_016	M	M	M	M	FI	compulsory	Col_095	C	C	C	C	
		Col_017/18	M	M	M	M			Col_203	C	C	C	C	
		Col_019/20	M	M	M	M			optional	Col_116	M	.	M	M
		Col_025	M	M	M	M				Col_120/121	M	.	M	M
		Col_026	M	M	M	M				Col_122/123	M	.	M	M
		Col_027/29	M	M	M	M				Col_124/131	M	M	M	M
		Col_030/33	M	M	M	M				Col_132/139	M	M	M	M
		Col_034/35	M	M	M	M				Col_140/147	M	M	M	M
		Col_036/37	M	M	M	M				Col_148/155	M	M	M	M
		Col_038/39	M	M	M	M				Col_156/163	M	M	M	M
		Col_040/43	M	M	M	M				Col_303/305	M	M	M	M
		Col_046	M	M	M	M								
		Col_049/50	M	M	M	M								
		Col_056/57	M	M	M	M								
		Col_058	M	M	M	M								
		Col_059	M	M	M	M								
		Col_060	M	M	M	M								
		Col_066	M	M	M	M								
		Col_092	C	.	C	.								
		Col_095	C	.	.	C								
		Col_170/171	M	M	M	M								
		Col_176	M	M	M	M								
		Col_197/202	M	M	M	M								
		Col_203	C	.	C	C								
		optional	Col_021/22	M	M	M			M					
Col_082	M		M	M	M									
Col_083	M		M	M	M									
Col_099	M		M	M	M									
Col_100	M		M	M	M									
Col_116	M		M	M	M									
Col_120/121	M		M	M	M									
Col_122/123	M		M	M	M									
Col_205	M		M	M	M									
Col_206	M		M	M	M									
Col_207	M		M	M	M									
Col_208	M		M	M	M									
Col_293	M		M	M	M									
Col_298	M		M	M	M									
Col_307/308	M		M	M	M									
Col_312/315	M		M	M	M									

### Explanatory notes:

<b>compulsory</b>	Variables that must be provided according to Council Regulation (EC) No. 577/98.
<b>optional</b>	Variables which are optional either for all quarters or for some quarters according to Council Regulation (EC) No. 577/98.
<b>M</b>	>99% non-response, blank, not applicable. Non-response is calculated after applying the respective filters according to Commission Regulation (EC) No. 1575/2001.
<b>C</b>	Constant.
<b>W</b>	Variable not in main file but is provided in a separate file as a wave variable.
<b>.</b>	There are at least 1% of the records with a valid response other than blank or not applicable, or the variable is optional and was not necessary in the quarter.
<b>blank</b>	There is no data file for the corresponding quarter.