

**Labour force survey in the EU,
candidate and EFTA countries**
Main characteristics of national surveys, 2010

2012 edition

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Preface

This report describes the main characteristics of the Labour Force Surveys in the 27 Member States of the European Union, four Candidate Countries (Croatia, Iceland¹, the former Yugoslav Republic of Macedonia² and Turkey), and two EFTA countries (Norway and Switzerland) in 2010.

All of these countries provide Eurostat with Labour Force Survey (LFS) micro-data for publication. The aim of this report is to provide information regarding the technical features of the surveys carried out in these countries in order to enable users to accurately interpret the LFS results.

From 2005 all Member States have been conducting a continuous quarterly survey, covering all the weeks of each quarter. As regards Candidate and EFTA countries, in 2010 they all carried out a continuous survey except Turkey, which only considers a single reference week per month.

The LFS measures the labour status and other characteristics of the population in an averaged week in each quarter, by spreading the sample uniformly over all the weeks of the quarter.

The main characteristics of the national practices are presented in this report. The information is mostly organised on the same lines as in the 2009 edition *The European Union labour force survey: main characteristics of the national surveys 2009*. This will enable users to evaluate the degree of comparability achieved. Country sheets include a section on the main conceptual, methodological or organisational changes introduced in recent years, to allow the reader to have an idea of recent changes at a glance. Tables 1 to 3 at the end of the report provide summary information for some of the characteristics described in the report.

For more detailed information on the results, common practices, methods and definitions of the European Labour Force Survey, see the EU LFS dedicated section on Eurostat's website at:

http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/introduction

The information necessary for preparing this publication was mainly collected in 2011 and 2012. Eurostat wishes to thank the experts responsible for the national labour force surveys in the Member States, Candidate and EFTA countries for their help in compiling the data presented in this report.

¹ Iceland also belongs to EFTA.

² In some tables the abbreviation MK is used for the former Yugoslav Republic of Macedonia. This is a provisional code which does not prejudice in any way the definitive nomenclature for this country, which will be agreed following the conclusion of negotiations currently taking place on this subject at the United Nations.

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CHARACTERISTICS OF NATIONAL SURVEYS IN 2010

BELGIUM (BE)

General

The survey started in 1983 as an annual survey, but has been continuous since January 1999 providing quarterly and yearly results.

The survey covers the entire country. Only private households, where at least one person is younger than 77, are included in the survey.

Participation in the survey is compulsory.

The household is the unit comprising either one person living alone or two or more persons, whether or not of the same family, who usually occupy the same dwelling and live there together.

Sampling plan

The planned quarterly sample size is 14 625 households, which represents an average sampling rate of about 0.3%. The survey is based on a two-level stratified sampling plan. The survey base is the National Register of Persons, which is derived from communal population registers.

The entire national territory is divided into provinces (NUTS 2) forming 12 strata. The allocation is proportional to the square root of the number of households in each province. This increases the sampling rate of the least-populated strata.

Within each stratum, two-stage sampling is carried out. The primary units comprise parts of the communes called 'statistical sections' (6 192 in the whole country, with 676 households on average and covering 5 km² on average). Their probability of selection is proportional to the number of households in them, with replacement of any 'small' section (at most 27 households) by another section of the same municipality; the 'small' sections only represent 0.15% of the total number of households.

The secondary sampling unit is the household.

Within each primary unit, 23 households (in both the Flemish and Walloon region) or 26 (in the Brussels region) are drawn at random using a method which ensures that the entire register of the primary unit in question is covered.

The overall survey rate (secondary units) is identical for all municipalities in each stratum.

No rotation system is applied. There is only one wave.

Weighting procedure

Extrapolation to the population, including adjustments for non-response, is done at the level of individuals, using a posteriori stratification by province (NUTS 2), sex and age (five-year age groups). In each of the post-strata thus obtained, a weight is calculated whose numerator is the population at the middle of the quarter according to the National Register of Persons and whose denominator is the number of usable responses.

Data collection

Detailed information (relating to individuals aged 15 years and over) is collected by means of face-to-face interviews in the three or four weeks following the reference week. In households of retired persons, interviews can be conducted by telephone. In 2010, 27% of the interviews were made by computer-assisted personal interviewing (CAPI), 73% by paper and pencil interviewing (PAPI).

In terms of initially drawn households, the response rate was 72.1%. Refusals accounted for 11.8% of the total non-response. In 2010, 16.5% of the interviews of persons aged 15-74 years were carried out by proxy.

Major changes in recent years

- 2006: CAPI is introduced (but most of the interviews still in PAPI).
- 2008: The national questions and instructions about education and training take into account the Bachelor/Master structure of higher education. As a consequence, a break is introduced between 2007 and 2008 for the level of education.
- 2009: Imputations of the earnings variable (net wages) based on the structure of earnings survey.
- 2010: Last revision of the questionnaire. Besides some textual changes the questions on the level of education have been revised. The single question recording the level of education was divided into several questions.

BULGARIA (BG)

General

The survey started in 1993, providing quarterly results from 2000 based on a single reference week in the last month of the quarter. In 2003 the survey was redesigned as a continuous Labour Force Survey, providing quarterly results.

The survey covers the whole country. Only private households are included. Persons living in student hostels or in workers' hostels are treated as private households.

All households covered in the sample are surveyed within three months, with the reference period evenly spread throughout the 13 weeks of the quarter.

Participation in the survey is voluntary.

The resident population includes all persons usually residing in Bulgaria, including persons temporarily abroad (less than one year). The survey covers all the members of the selected households including people absent from home due to: business trip, seasonal or temporal work, tourism, temporary (less than 6 months) stay in hospitals or other health institutions for medical cure and other.

A household is defined as a group of two or more people living together in a house or a part of a house and having a common budget. Any person stating that they do not belong to any household and that they live on their own budget is considered as a single-person household.

Sampling plan

The Labour Force Survey is based on a two-stage stratified cluster sample. Clusters are the enumeration districts at the first stage and households at the second stage. In the first stage 2 438 enumeration districts are selected with probability proportional to the population in the districts. In the second stage eight households are sampled with a systematic random sample from each primary sampling unit (PSU).

The sample consists of three independent sub-samples of enumeration districts for each month of a quarter, consisting of 4 calendar weeks, and of an additional sub-sample (1 504 households) for the thirteenth week of the quarter. The households from each of these sub-samples are evenly spread over the weeks, and 1 500 households per week are observed.

The sample is stratified by district (28 administrative districts at NUTS 3 level), crossed with urban/rural area.

The base for the LFS sample is provided by the 2001 Population Census. The enumeration districts and households in the sample are selected from the list of enumeration districts and households prepared during the Population Census.

The sample unit is the household. In total 19 504 households are sampled each quarter, corresponding to an overall sampling rate of 0.65%.

A 2-(2)-2 rotation pattern is used. According to the rotation scheme (applied since March 1996) half of the households (four in each enumeration district) stay in the sample for two consecutive quarters. Respondents are interviewed in two consecutive quarters, then they are temporarily removed for the next two quarters and entered again for the following two quarters, thereafter being definitively removed from the survey.

A sub-sample is used to survey most of the structural variables in Commission Regulation (EC) No 377/2008, for which only yearly results are required. The sub-sample is determined according to a wave approach, i.e. it includes the units of each full quarterly sample which, according to the rotation scheme, are interviewed for the third time (3rd wave). Thus the full sub-sample for the structural variables is spread over all the weeks of a year and has a theoretical size of about 19 504 households.

Weighting procedure

The current population estimates as of 31 December of the preceding year are used for weighting the results. These data do not exclude institutional population, although it is not covered by the survey. Data obtained by the survey are post-stratified by 28

districts, urban/rural areas, sex and four age groups. All persons in each of these 448 strata have the same weight. The weight is calculated by dividing the population in each stratum by the number of interviewed persons in the same stratum.

Data collection

The data are collected in face-to-face interviews, using pencil and paper questionnaires. All persons in the household aged 15 years and over are interviewed.

In 2010, 35.5% of the interviews of persons aged 15-74 years were by proxy.

The average response rate in 2010 was 82.0%. Refusals accounted for 25.7% of the total non-response³.

Major changes in recent years

2006:

- A new LFS questionnaire being used since the first quarter of 2006, increasing the number of available variables.
- WSTATOR – Parental leave, newly introduced in Bulgaria, is taken into account to determine the ILO labour status and is considered as employment from which the person concerned was absent during the reference period.

2007: The new NUTS 2 codes introduced.

2008:

- The wave approach implemented in the national LFS at the beginning of the year. Twenty five variables collected on an annual basis. The third wave is used for data collection of annual variables.
- Sample size increased by 1 504 households (to a total sample size of 19 504 households).
- Reference period extended to all 13 weeks of the quarter.
- No compulsory military service from the beginning of 2008.
- Several changes introduced to the questionnaire to match more closely the list of EU-LFS variables and explanatory notes, especially for the definition of the ILO labour status.

³ Non-occupied dwellings are not taken into account in estimating the non-response rate.

CZECH REPUBLIC (CZ)

General

The survey has been conducted since December 1992 as a continuous quarterly survey, shifting from seasonal quarters to calendar quarters by the end of 1997.

The survey covers the whole country. Only private households are surveyed.

Participation in the survey is voluntary.

The target population comprises all persons usually living in the selected dwellings, disregarding the type of their stay there (permanent, temporary or non-registered). Temporarily absent persons (for less than one year) and domestic servants are included. It does not cover persons (students, workers, migrants) living in collective accommodation. Lodgers are considered as independent budget-keeping households. People living abroad are excluded.

Sampling plan

The sampling plan is a stratified two-stage probability sample of dwelling units.

The strata consist of 77 districts with Prague considered as one district.

The primary sampling units (PSUs) are census areas that are sampled (by randomised systematic sampling) with probability proportional to size, i.e. the number of dwellings per census area, using the Register of Census Areas as a sampling frame.

In the second stage, dwelling units are selected from the initial sample by simple random sampling.

The initial sample of PSUs consists of the 5 650 census areas, while the approximate final sample size is 33 900 dwelling units per quarter, constituting an overall quarterly sampling fraction of 0.6%. Each quarterly sample consists of five panels interviewed for five quarters consecutively until rotated out of the sample.

Weighting procedure

The weights are based on post-stratification to 12 age groups, sex and the 77 districts. Demographic figures for each quarter of 2010 were forecasted from the definitive demographic data for end-of-year 2009, taken into account migration and natural increase of population.

Data collection

The LFS data are collected in first visits with face-to-face interviews, with repeat interviews being partly done by telephone (22%). The majority of the interviews were conducted with the assistance of electronic equipment (CAPI) with few exceptions. All persons aged 15 years or more and living in the sampled dwellings are interviewed.

In 2010, 46.7% of the interviews of persons aged 15-74 years were carried out by proxy. The response rate was 80.8%. Refusals accounted for 75.2% of the total non-response.

DENMARK (DK)

General

The survey started in 1984 as an annual survey, but has been organised as a continuous survey providing quarterly results since 1994.

The entire country is covered, apart from Greenland and the Faroe Islands.

The survey covers persons living in either private or collective households.

There is no specific national legislation making it compulsory to provide information for the survey, and participation is therefore voluntary.

The resident population comprises persons with domicile in Denmark (excluding Greenland and the Faeroe Islands) according to the Central Population Register.

Sampling plan

The quarterly sample size is on the whole 40 000 individuals (aged 15-74 years), which represents an average survey rate of approximately 0.9% for the quarterly survey.

The sampling unit is the individual.

A stratified sample design is used. The sampling frame is the Central Population Register and the Unemployment Register. This is further enhanced with information from the labour market register and the income register.

Persons aged 16-64 years that were registered as unemployed in a specific quarter prior to the survey quarter are selected with a higher probability than their relative proportion of the total population. In total there are 7 strata since Q2 2009. The sizes of different strata are adjusted according to which combination reduces the standard error the most for the variable labour market status.

Respondents are surveyed 4 times: First time in the initial quarter, then the following quarter, a third time a year apart from the initial quarter, and the final and fourth time the quarter thereafter. This implies that half the sample is renewed each quarter. Simultaneously with the fourth interview round the rest of the respondent's household is also interviewed.

Weighting procedure

The strata are weighted separately. Weighting is performed by using a combination of sex, age group (15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-74), socio-economic status, income, nationality, level of education, status in the unemployment register, region, and whether the dwelling place was recently changed or not.

Data collection

All interviews for the Danish core LFS are conducted via telephone interviewing (CATI). For the household subsample the CATI is supplemented with computer-assisted web interview (CAWI). Persons, in the first interviewing round, who could not be reached by telephone in the first two weeks or whose phone number cannot be found, undergo a manual process of phone number searching. For these persons the interview

period is four weeks. Demographic information (e.g. sex, year of birth, marital status, and nationality), income and level of education, training and the year of completion are variables obtained from the statistical registers based on administrative sources (The Population Register and The Educational Statistical System).

About 3.5% of the interviews (of persons 15-74 years) were carried out by proxy.

The response rate was 51.9% in 2010. Refusals accounted for 14.2% of the total non-response.

Major changes in recent years

2007:

- Sample size more than doubled.
- Rotation scheme changed from 2-(3)-1 to 2-(2)-2.
- More efficient use of auxiliary variables in weighting procedures.
- Face-to-face interviewing used as supplementary data collection method.

2009:

- Sample size increased to 40 000 pr quarter.
- Sampling scheme changed from 3 strata to 7 strata.

2010:

- No more CAPI interviews are conducted.
- Introduction of an extra module for the Danish institute of welfare research on the employment of disabled people in Q1.

2011: At the end of 2011 the weights for the entire period back to 2007 were revised.

GERMANY (DE)

General

The Labour Force Sample Survey is carried out as part of the annual micro-census, which is based on the 'micro-census law'. The micro-census has been carried out since 1957 in the old West Germany, and since 1991 in the new Bundesländer and East Berlin. In general the micro-census is compulsory. Additionally, the questionnaire includes optional parts of the LFS and other special national programmes. Starting in 2005 the survey was organised as a continuous survey covering all weeks of the year, providing quarterly results. The questionnaire was revised at the same time, especially questions relating to employment in the reference week.

The survey covers private and collective households, except for military quarters. A private household comprises either a person living alone or two or more persons, irrespective of their relationship. The members of a private household are characterised

by the same dwelling and common housekeeping. National service personnel and students are included in their parents' households.

The resident population (statistical population) includes all inhabitants with their main place of residence and their secondary residence in the territory of the Federal Republic. Foreign armed forces and members of the diplomatic corps and their families are excluded.

The reference week is the week before the interview.

Sampling plan

Three sources are used for the sampling plan. The census data from 1987 constitute the survey base for the 'old' federal States. The central population register of the German Democratic Republic gives data for the 'new' federal States. Both statistics are annually updated by the register of new dwellings. The sample is an area sample covering all areas of Germany. Sampling units are the sampling districts comprising nine dwellings on average. Statistical units are the households in the sampling districts.

All buildings are assigned to one of three strata, depending on the number of dwellings they comprise. The first stratum contains a number of buildings which are close to one another (but not necessarily contiguous) and comprise fewer than five dwellings. In this stratum, each sampling district comprises about 12 dwellings. The second stratum comprises buildings with between 5 and 10 dwellings. Each of these buildings constitutes a sampling district. The buildings in the third stratum comprise 11 dwellings or more. In this stratum, the 'sampling district' is a subdivision of the building, the target size being 6 dwellings. An additional stratum covers the population living in collective households. It is divided into sampling units with a target size of 15 persons.

All persons in a selected sampling district are interviewed.

The sampling districts are stratified by region and size of the buildings. The stratification by size of the buildings is based on the size classes used to work out the sampling units. The sampling rate is the same in each stratum. Within each stratum, an effect similar to stratification is obtained by systematic sampling in a list classified by geographical entity.

There are 201 regions which comprise an average of 350 000 inhabitants. The list of sampling districts is sorted within each stratum by sub-region, Kreis (administrative district), the size class of the commune, commune and number of the sample district. This list is divided into groups of 100 consecutive sampling districts. A sample of 1% is drawn at random for the micro-census in each of these groups and allocated to each month of the year.

The average quarterly sample design comprises about 86 000 households, corresponding to a sampling rate of 0.25% of the households in the sampling districts.

The rotation system is composed of four waves (rotation quarters). Each sampling district remains in the sample for four years and 25% of the sample is replaced each year. Thus, the degree of overlapping between two consecutive yearly samples is 75%. In general no one is interviewed more than once a year.

A sub-sample is used for variables for which only yearly results are required (Annex I, Commission Regulation (EC) 377/2008). These variables are the ad-hoc-modules and those structural variables which are not micro-census variables as well (SUPERVISOR, WAYJFOUND, TEMPAGCY, NEEDCARE). The sub-sample is a random sample out of the full sample. Its size is about 1/10 of the core sample, corresponding to 0.1% of the population.

Weighting procedure

A two-stage adjustment procedure is used.

- (a) If possible, limited data are collected for households which fail to respond. These data can include: number of members of the household, nationality (German/foreign), and for households comprising only one person: age (under or over 60 years) and sex. From this data, the weightings of respondent households are increased to take account of non-responses in the region.
- (b) The sample, weighted to take account of non-response, is stratified a posteriori by region, sex, age (<15, 15-44, 45+) and nationality (German/EU foreigners, non-EU foreigners (except Turkey), Turkey) and is extrapolated to the population (adjusted in respect of military personnel).

Data collection

The field staff of the 14 statistical offices of the federal states comprises about 1 800 interviewers. All information should be collected by face-to-face interviews (CAPI, about 73% of all interviews). Households that cannot be contacted by the interviewers (three attempts) or refuse face-to-face interviews are sent a questionnaire by post and a hotline is offered. About 23% of the respondents give a written response. Besides these collection methods a hotline for telephone interviews is offered. The share of telephone interviews comes to 4%. It is permissible for one person (18 years or older) to give answers for other household members.

In 2010 25.6% of the interviews of persons 15-74 years old were carried out by proxy.

The response rate in 2010 was 97.5%.

Major changes in recent years

2006: Implementation of the wave approach

2007: Questionnaire changed to better capture ILO employment.

2008: Questionnaire further changed to match more closely the EU-LFS operational guidelines for the definition of labour status.

2009: Respondents registered at the public employment office, but not looking for employment, are no longer classified as job seekers.

ESTONIA (EE)

General

The Estonian Labour Force Survey, which started in 1997 as an annual survey, has since 2000 been organised as a continuous quarterly survey.

The survey covers the whole country. Both private and collective households are surveyed.

Participation in the survey is voluntary.

The target population comprises all persons aged 15-74 years with permanent residence in Estonia, i.e. those who have lived or intend to live in Estonia for more than one year.

The household is made up either of persons living alone or of two or more persons who share a household budget and usually occupy the same dwelling.

Sampling plan

The sample size per quarter is 3 000 households, with a sampling rate of approximately 0.7% of the population aged 15-74 years.

The sampling frame is based on the Population Register, comprising all resident persons aged 15-74 years. The last update of the sampling frame was in 2010.

The sampling design is a stratified systematic one-phase sampling of individuals. Individuals are systematically sampled within each stratum and their households included in the sample.

A 2-(2)-2 rotation pattern is used. Every quarter 25% of the households are participating in the survey for the first time. Respondents are interviewed in two consecutive quarters, then they are temporarily removed for the next two quarters and entered again for the following two quarters, thereafter being definitively removed from the survey. This procedure ensures a 50% sample overlap between consecutive quarters and a 50% sample overlap with the same quarter of the previous year. The 15 counties of Estonia and Tallinn are divided into four strata according to the population size (I – Tallinn, II – four bigger counties, III – ten smaller counties, IV – Hiiu County) and different inclusion probabilities are used in strata, the highest being for Hiiu County.

Weighting procedure

The weights are calculated in a sequence of steps. A weight resulting from the previous step is multiplied by the correction factor calculated at the current step. The correction factors are scaled in such a way that their sample average is unity at each step. As a result, the final weight is a product of the initial weight and correction factors.

As stratified sampling is used, the initial weight that is inversely proportional to the inclusion probability in each stratum is calculated first.

For non-response adjustment the non-response correction factors are computed. The homogeneous response groups of reasonably uniform size of sampled households are formed on the basis of the place of residence of the household according to the non-

response rate in the region. Within each group the correction factor is inversely proportional to the overall response rate in the region.

In the next step the weights are calibrated so that they produce exact population numbers in certain subgroups known from demographic data (including institutional population). For working-age persons the subgroups by sex, age (five-year age groups), place of residence (urban/rural area, 15 counties (NUTS 4 level) and the capital city) and Estonians/non-Estonians are considered. For this purpose the linear consistent weighting method is applied.

For non-working-age persons the non-calibrated household's weights are calibrated by sex and five-year age groups.

Data collection

Data collection method is CAPI. All interviews are conducted by interviewers of the Data Collection Department of Statistics Estonia. The interviewing is normally done during the week immediately following the reference week but never later than five weeks following the reference week.

About 29.4% of the interviews of 15-74 year olds were by proxy in 2010.

The response rate in 2010 was 60.8%. Refusals accounted for 38.3% of the total non-response.

Major changes in recent years

2007: Sample size increased from 2 500 to 3 000 households each quarter.

IRELAND (IE)

General

The Quarterly National Household Survey started in September 1997, replacing the annual April Labour Force Survey (1983-1997). The survey is a continuous one, providing quarterly results. From 1997 until 2008, the quarters referred to the seasonal quarters, i.e. the winter quarter (1st quarter) refers to December of the previous year, January and February, and so on. However, in Q1 2009 the QNHS changed to provide data based on calendar quarters and the first quarter now refers to the months January-March inclusive. The population comprises persons who usually reside on Irish territory.

All the regions are covered.

Only private households are included.

The private household is made up either of persons living alone or of two or more persons, whether or not of the same family, usually occupying the same dwelling and sharing a joint budget.

There is no specific legislation making it compulsory to provide information for the survey. Participation is therefore voluntary.

Sampling plan

A two-stage sample design is used. This comprises a first-stage sample of 2 600 blocks (or small areas) selected at county level to proportionately represent eight strata reflecting population density. Each block selected contains, on average, 75 dwellings and the sample of blocks is fixed for a period of about five years. In the second stage of sampling, each block is split into rotation groups each containing 15 households. Each quarter one rotation group from within a given block is surveyed to give a total quarterly design sample of 39 000 households, representing about 3% of the Irish households. The level of achieved sample however has varied over time as a consequence of the varying number of interviewers which are available as well as the achieved response rate.

The primary sampling units are stratified as follows:

1. County Boroughs
2. Suburbs of County Boroughs
3. Environs of County Boroughs
4. Towns 10 000 +
5. Towns 5 001 – 10 000
6. Towns 1 000 – 5 000
7. Mixed Urban/Rural Areas
8. Rural Areas

The base for the sampling frame is the 2006 Census of population.

Households are asked to take part in the survey for five consecutive quarters and are then replaced by other households in the same block. Thus, one fifth of the households in the survey are replaced each quarter and the QNHS sample involves an overlap of 80% between consecutive quarters and 20% between the same quarters in consecutive years.

Weighting procedure

The expansion factor is to population totals.

The survey results are weighted to agree with population estimates broken down by age (five-year age groups), sex and region (NUTS 3 regions). The estimates are calculated as follows:

1. The previous quarter's population estimate or census of population at regional level is used as the base population.
2. A quarter of this population is aged on by 1 year.
3. Births for the relevant period are added to each region – source = registered births.
4. Deaths for relevant period are subtracted from each region – source = registered deaths.

5. Net migration (inflows from other regions minus outflows to other regions plus inflows from abroad minus outflows to abroad) is added to each region – main source = Quarterly National Household Survey (QNHS – formerly annual Labour Force Survey).

The result is the new population estimate at regional level.

Data collection

Interviews are carried out on a face-to-face basis with the help of portable computers (CAPI). All the information is obtained by interview.

On average in 2010, almost 48% of the interviews were carried out by proxy.

In terms of the blocks covered in 2010, the response rate was 81.2%. Refusals accounted for 23.6% of the total non-response.

Major changes in recent years

2009: Update of survey to collect data on a calendar quarter basis rather than a seasonal basis.

GREECE (EL)

General

The survey started in 1981 as an annual survey covering all weeks of the second quarter. In 1998 it was redesigned as a continuous survey providing quarterly results.

It covers only private households. Participation in the survey is compulsory.

The resident population comprises persons who are staying (or intend to stay) at least 1 year in Greece.

Sampling plan

The sampling frame is based on the 2001 census. The sampling frame was completely updated in between the 1st quarter of 2009 and the 2nd quarter of 2010. The sampling design is a two-stage probability sampling of dwellings. Each area unit (primary unit — one or more building blocks) of the stratum has a probability of being selected proportional to its size (number of households in the last population census of the year 2001). In the second stage the sample of dwelling units is selected from each primary unit with systematic selection with equal probabilities. If more than one household lives in the selected dwelling, all of them are interviewed.

The theoretical quarterly sample size is approximately 32 600 households, corresponding to a sampling rate of about 0.85%.

In each Department (NUTS 3), the stratification of primary units is conducted by allocating the Municipalities and Communes according to the degree of urbanisation (urban, semi-urban, and rural regions). Except for the two major city agglomerations

(Athens and Thessaloniki) the strata produced according to the degree of urbanisation are:

Urban Stratum: Agglomerations and Municipalities with 10 000 inhabitants or more

Semi-urban Stratum: Municipalities and Communes with 2 000 to 9 999 inhabitants

Rural Stratum: Communes up to 1 999 inhabitants

The Greater Athens Area is divided into 31 strata of about equal size (equal number of households) on the basis of the lists of city blocks of the municipalities that constitute it and taking into consideration socio-economic criteria. Similarly, the Greater Thessaloniki Area is divided into nine equally sized strata. All other NUTS 3 areas are divided into two or three final strata. The two Major City Agglomerations account for 40% of the total population and for even larger percentages in certain socio-economic variables.

A rotation system comprising six waves is used. Respondents are questioned every quarter, for six consecutive quarters. Every quarter, one sixth of the sample is replaced.

Weighting procedure

The survey weights are adjusted every quarter so that the estimated (from the survey) total population coincides with the estimated (from the projection of the 2001 census results) population by region (NUTS 2), age groups, and sex (for the members of private households).

Data collection

Interviews are carried out on a face-to-face basis with paper questionnaires, in the first wave. During waves 2 to 5, telephone interviews are also carried out.

42.3% of the interviews of persons aged 15-74 years were carried out by proxy.

The response rate in 2010 was 85.8% Refusals accounted for 26.6% of the total non-response.

Major changes in recent years

2008: Households with all members aged 70 years or more interviewed only in the first wave and no longer in all waves (except in the second quarter, when the age limit was set to 74 because of the ad hoc module).

2009: Questions for variables full time/ part time, permanent/temporary, job search and participation to non formal education reformulated. Information on the regional level NUTS 3 is included in the data set.

SPAIN (ES)

General

The Spanish Labour Force Survey was launched for the first time in 1964, referring to some quarters in each year until 1968. Between 1969 and 1974 it was biannual, but quarterly from 1975. In 1999 the survey was redesigned as a continuous survey providing quarterly results. Since 2005 the survey provides quarterly results for core variables, but annual results for structural variables.

Since 1996 the survey is compulsory as it was included in the yearly statistical program.

The population residing in private households is covered, including servants; persons living in collective households and persons who are temporarily absent are sampled via relatives living in private households. Foreign nationals are included in the resident population if they have lived or intend to live in Spain for more than one year.

The household concept used is that of the 'dwelling household' (all people living in the dwelling are interviewed).

Sampling plan

In 2010 the initial sample size was 71 000 each quarter, decreasing in practice to effective sample sizes of approximately 65 000 households per quarter, representing an average sampling rate of about 0.4% of the population living in the country.

An increase of the sample size took place in the third quarter of 2009. This was in response to a specific need raised by the Administration of the Autonomous Community of Galicia.

The sampling is a two-stage sampling procedure with stratification of the primary units. First-stage units are geographical areas in which all the country is split. These areas are stratified within each province, using the population size of the municipality. Within each stratum, the areas are sub-stratified according to the socio-economic characteristics of the population.

Second-stage units are private households (dwelling units).

The sample is made up of six rotation groups. Households, once selected, remain in the sample for six consecutive quarters before being replaced. In any quarter, households of one wave are receiving the first interview; households of another wave are receiving the second interview, and so on.

Each quarter, the household sample in one sixth of the primary unit sampled is replaced by a new sample. Thus, there is an 83% potential overlap in the samples for each consecutive quarter. The current sample size of primary units, is 3 822 and the average sample size of the secondary units in each area is in general 18 but 22 in the big metropolitan areas.

Units are selected in such a way as to obtain self-weighted samples within each stratum. The first-stage units are selected with probability proportional to the size and second-stage units are selected with equal probability.

A sub-sample is used to survey the structural variables in Commission Regulation (EC) No 377/2008, for which only yearly results are required. The sub-sample is determined according to a wave approach, i.e. it includes the units of each full quarterly sample which, according to the rotation scheme, are interviewed for the sixth and last time (6th wave). Thus the full sub-sample for the structural variables is spread over all the weeks of a year and has an effective size of about 40 000 dwelling units.

Weighting procedure

The design uses Ratio Estimator and the auxiliary variable is the Population Projection at stratum level.

Every quarter, population projections by age group (0–15 years and 16 years +) and Spanish provinces (in general corresponding to NUTS 3 regions) are calculated. Projections by age and region are distributed by stratum in proportion to the population of each stratum. In each stratum, age group and region, the weighting is determined by the ratio of the projection to the sample size.

The sample is then calibrated in order to adjust to the population distribution. Auxiliary information used is in the form of population projections by sex and five-year age groups at NUTS 2 level (Comunidades Autónomas), the nationality of the population aged 16 and more (national/non-national) at NUTS 2 level and by age (under 16, above 16) and region (NUTS 3 or provinces).

A linear weighting method is used, in which each member of the household aged 16 years and over has the same weight.

Data collection

All the information is collected by interview. The first interviews are personal ones. Interviews in the second and subsequent waves are carried out by telephone, except when the family wants a personal interview or there is no telephone. All interviews are done with the help of portable computers. Since 2005 telephone interviews are carried out through the CATI system that, apart from management of the telephone interviews, allows the interviews to be checked on-line.

53% of the interviews of persons aged 16-74 years were carried out by proxy.

The average response rate in 2010 was 83.7%. Refusals accounted for 39.5% of the total non-response.

Major changes in recent years

2005: Variable nationality (Spanish or foreigner) included as a new auxiliary variable, for calibration.

2006: Implementation of the wave approach.

FRANCE (FR)

General

The French Labour Force Survey started in 1950 and was organised in 1954 as an annual survey. Redesigned in 2003, the survey is now a continuous survey providing quarterly results.

The survey covers private households in metropolitan France.

It includes part of the population living in collective households, i.e. the persons who have family ties with private households. Yet these persons are not included in the results; the target population is the population living in private households.

Participation in the survey is compulsory.

The resident population comprises persons living on French metropolitan territory.

The household concept used is that of the 'dwelling household': a household means all persons living in the same dwelling. It may consist of a single person, or of two families living in the same dwelling.

Sampling plan

All individuals 15 years old or over in the household are surveyed.

All weeks of the year are reference weeks. Data collection is continuous. The quarterly sample is evenly spread over its 13 weeks.

The results are quarterly. Each quarter consists of 13 (or 14) reference weeks. The sample is representative for the population in metropolitan France each quarter.

The sample is composed of clusters of dwellings units. Metropolitan France is stratified in 189 strata (21 French regions x 9 types of urban units). In each stratum, primary sampling units (PSUs) are the smallest areas composed of ilots (neighbourhoods), comprising at least 120 dwellings. At a first stage, PSUs are selected from each stratum, with different probabilities proportional to the number of dwellings. At a second stage, secteurs (clusters), comprising between 120 and 240 dwellings, are sampled within the selected PSUs with probability proportional to the number of dwellings. PSUs which have less than 240 dwellings are composed of only one secteur, which is therefore sampled with probability 1. Finally, secteurs are divided into aires, i.e. geographical areas of about 20 dwellings. As a third stage, six aires are sampled from each secteur. Aires constitute the final sampling units. Each aire is surveyed for six quarters, and then is replaced by another area in the same secteur.

The sampling frame is the Population Census of 1999. New dwellings (constructed between the date of the Census and the date of the survey) in the areas are listed by the interviewer at the time of the survey. If the area contains fewer than 10 new dwellings, all of them are surveyed; if the area contains between 10 and 40 new dwellings, 10 of them are surveyed; if the area contains more than 40 new dwellings, a quarter of them are surveyed. The sample unit is the dwelling: in each sampled area, every private household living in its main residence is surveyed.

Since the beginning of 2009, there is a new sample, additional to the sample from the Population Census. The new sample, independent of the old one, entered progressively in the field one sixth at a time. The aim was to increase the total size of the LFS sample by 50% towards the second quarter of 2010. Since then, the old sample is progressively replaced by the new one. The sample frame is the tax register. The sample is updated each year with new information and a sample of new dwellings is added. The sampling method consists of a selection of 'secteurs' (clusters) with a stratified and balanced method. The stratification is by NUTS2. The balanced sampling uses the variables: age, income, type of dwelling, type of urban unit. Each quarter, about 67 500 dwellings are sampled, which represents an average sampling rate of about 0.25%.

Each cluster area is surveyed for six quarters consecutively. Each quarter, the sample contains six sub-samples: 1/6 of the sample is surveyed for the first time, 1/6 is surveyed for the second time, 1/6 is surveyed for the sixth (and last) time.

A sub-sample is used to survey variable INDECIL, i.e. monthly (take-home) pay from main job. The sub-sample is determined according to a wave approach, i.e. it includes the units of each full quarterly sample which, according to the rotation scheme, are interviewed for the first and for the sixth and last time (1st and 6th wave). Thus the full sub-sample is spread over all the weeks of a year and has a size of about 51 000 dwellings with at least one respondent.

Weighting procedure

The grossing-up factor is the estimated number of persons living in private dwellings.

1. A correction for non-response is made, using several criteria: size of urban unit, number of rooms in the housing, type of housing (individual house, building...), number of new dwellings and region. Another correction for non-response is made using the answers to the non-response survey: the employment and unemployment rates are adjusted to the ones obtained when including the non-response survey.
2. An adjustment to the population estimates (at the middle of the quarter) by five-year age groups and gender, at NUTS 2 level, is made for each independent sub-sample.

Data collection

The collection method is a face-to-face interview on the first and the last occasions and intermediate telephone interviews (2nd to 5th waves). The first interview, when the full set of questions is asked, lasts on average 15 minutes; the second to the fifth interviews last 7 minutes and the final one 6 minutes. About 30.5% of the interviews were carried out by proxy.

The average response rate in 2010 was 82.7%. Among the non-response, refusals amounted to 25.9%.

Major changes in recent years

2007:

- Change in the weighting scheme:

- a) The sample is now expanded to the number of persons in private households and no longer to the total population (i.e. including persons in collective households);
- b) NUTS 2 was added as a post-stratification variable. These changes have been implemented to previous data since 2003;

- Results of the supplementary non-response survey incorporated in the final results from the LFS (via the weighting process).

2009/2010: Completion of the gradual increase of the sample size (from first quarter 2009 to the second quarter 2010).

ITALY (IT)

General

The Italian Labour Force Survey was launched as a quarterly survey in 1959. Since the first quarter of 2004 the survey is a continuous one, covering all the weeks of the year. The labour status for each interviewed person is referred to a specific week (reference week), usually the one preceding the interview. Survey results are produced and disseminated on a quarterly basis and once a year as annual average. Since October 2009, main indicators on the labour market have been disseminated on monthly basis too.

The reference population is the resident population, which is the population recorded in the registry offices in the Italian municipalities. All the Italian regions are covered. Only private households are included in the sample. Private households are made up either of persons living alone or of two or more persons, whether or not of the same family, usually living in the same dwelling and with family (marriage, relationships, adoption, guardianship) or affection ties. Non-resident households, people not living in private households and household members emigrated abroad or absent from the selected household for more than one year are not covered.

Participation in the survey is compulsory.

Sampling plan

In 2010 the quarterly sample size was 77 920 households, giving an average sampling fraction of about 0.3%.

The sample design is a two-stage sampling with stratification of the primary units; municipalities are primary units, households are final units.

Stratification of primary units is carried out in each NUTS 3 domain and is based on the population of the municipalities. Large municipalities, with population over a given

threshold (also called self-representative municipalities), are always included in the sample; smaller municipalities (non-self-representative) are grouped in strata, then one municipality in each stratum is selected with probability proportional to the population.

The final sampling units are the households and they are randomly selected from the registry offices in all the municipalities drawn at the first stage.

The households are rotated according to a 2-(2)-2 rotation scheme. Households are interviewed during two consecutive quarters. After a two-quarters break, they are again interviewed twice in the corresponding two quarters of the following year. As a result, each household is included in four waves of the survey.

Weighting procedure

The calibration estimator is used to obtain LFS estimates. Grossing-up weights are determined as follows:

1. Firstly, initial weights are obtained as the inverse of the inclusion probabilities of any household in the sample.
2. Then, correction factors for households' non-response are worked out as the reciprocal of the response ratios (computed for specific kinds of households and territorial domains). Intermediate weights corrected for non-response are then computed multiplying initial weights by these correction factors.
3. Then, starting from intermediate weights, final grossing weights are obtained solving a minimisation problem under constraints. The function to be minimised is the distance between final and intermediate weights; the constraints regard the estimates of some auxiliary variables that have to be equal to the totals in the reference population derived from external sources. Main constraints are population by gender and 14 5-year age groups at NUTS 2 level and population by gender and 5 age groups of different width at NUTS 3 level. Final weights ensure that all members of a given household have the same weight.

Through the calibration estimator, applying final grossing-up weights, the sample reproduces the same distribution of the population according to the chosen auxiliary variables.

Grossing-up weights are computed on a monthly and on a quarterly basis, whereas annual estimates are calculated as averages of quarterly estimates.

Data collection

The information is collected through computer-assisted personal (CAPI) or telephonic (CATI) interviews, carried out by professional interviewers.

The response rate in 2010 was 87.7%. Refusals accounted for approximately 33.3% of the total non-response. 14.6% of the interviews of persons aged 15-74 years in 2010 were by proxy.

Major changes in recent years

- 2006: Changes to the questionnaire to take into account the legal suppression of compulsory military or community service and to fully tie in with the EU-LFS definition of unemployment.
- 2008: From the first quarter 2008, people aged 15 are considered as out of the labour force, to take into account a change in the national legislation which increased the number of years of compulsory education. Employment and activity rates are still computed with reference to the working age population 15-64 to keep the comparability. As very few 15 year olds are employed or unemployed, the impact on time-series is negligible.
- 2009: Small changes, in particular in the question wording of some national variables, to improve the adherence with the 2008 EU-LFS explanatory notes.
- 2010: Until the second quarter 2010, personal interviews (CAPI) were carried out for the 1st wave interviews and for the subsequent waves (2nd, 3rd and 4th waves) in households of foreign people or households with no telephone. Telephonic interviews (CATI) are conducted in all other cases. From the third quarter 2010, personal interviews (CAPI) are carried out in households of foreign people and in households with no telephone. Telephonic interviews (CATI) are conducted in all other cases.

CYPRUS (CY)

General

The Cypriot Labour Force Survey was launched in 1999 as an annual survey in the second quarter of the year. Starting with the second quarter 2004, the survey was redesigned as a continuous survey providing quarterly results.

The survey covers the areas of Cyprus controlled by the Government of the Republic of Cyprus. Only private households are covered.

Participation in the survey is compulsory.

The resident population comprises persons who usually reside in Cyprus or intend to stay in Cyprus for at least 12 months. It excludes Cypriot students studying abroad as well as foreign armed forces and foreigners who work in embassies or diplomatic missions.

The private household is made up either of persons living alone or of two or more persons, whether or not of the same family, usually occupying the same dwelling and sharing a joint budget.

Sampling plan

The sampling plan is a stratified two-stage probability sampling of dwelling units.

The variables used for stratification are the Districts and the urban/rural areas within each district.

The selection of primary sampling units (PSUs) is based on probability proportional to size sampling. The size refers to the number of households enumerated in the Population Census of 2001. This list is updated by new enumerations every year.

The secondary sampling units (SSUs) are the dwelling units selected systematically from a list of all dwellings belonging to the selected PSUs. Refusals, non-contacts (households absent for more than one month) and households unable to respond are substituted by the next household on the sampling frame.

The theoretical quarterly sample size is approximately 5300 dwelling units containing approximately 3900 households, which represents an average sampling rate of about 1.4%.

Each sample consists of six waves, five of which are carried over from the previous quarter. Each household is interviewed six times consecutively before being rotated out of the sample.

Weighting procedure

The results are weighted a posteriori to the population households by sex and five-year age groups. No district or urban/rural weighting is carried out.

Data collection

Data are collected with face-to-face interviews using CAPI in the first wave. Data in subsequent waves (2-6) are collected through telephone interviews using CATI. The response rate before substitution in 2010 was 96.6%. Refusals accounted for 77.2% of the total non-response.

The number of proxy interviews of persons aged 15-74 years was 32.1% in 2010.

LATVIA (LV)

General

The Latvian Labour Force Survey started in November 1995, producing results in May and November each year. In 2002 the survey was redesigned as a continuous survey and results are produced each quarter.

The survey covers the whole country. Only private households are surveyed.

Participation in the survey is voluntary.

The target population comprises all persons aged 15 to 74 years who are permanently resident in Latvia. Persons temporarily absent for one year or more are excluded.

A private household is defined as several persons living in one dwelling and sharing expenditures or one person having separate housekeeping.

Sampling plan

The sampling plan is a two-stage stratified probability sample.

Two sampling frames are built for each sampling stage. At the first stage the list of Population Census 2000 counting areas is used as a sampling frame. All territory of Latvia was divided into small areas during the Population Census 2000. The list contains information about the number of households in each counting area.

At the second stage, a sampling frame is built from the Population Register, statistical register of dwellings and statistical register of households.

The strata are defined by degree of urbanisation (Riga, eight other largest towns, towns and rural areas).

The census counting areas constitute the primary sampling units (PSUs) with few exceptions. These are selected from each stratum using systematic sampling with probability proportional to size.

The final sampling units are 24 128 households per year, i.e. 6 032 households per quarter, selected from the PSUs by a simple random sampling method. The overall sampling rate is approximately 0.68% per quarter.

Each household is interviewed four times by scheme 2-(2)-2.

Weighting procedure

The initial weights are calculated according to the sample design, with all persons within the same PSU having equal design weights. The design weights are adjusted using the data of response level in each PSU. These weights are then adjusted on the basis of demographic data. The breakdown into groups is different for adjustment of quarterly and yearly weights. Demographic data are broken down by degree of urbanisation (as in stratification), 14 age groups (0-14; 15-19; 20-24; 25-29; 30-34; 35-39; 40-44; 45-49; 50-54; 55-59; 60-64; 65-69; 70-74; over 75) and sex for adjustment of the quarterly weights. For adjustment of the yearly weights demographic data are broken down by degree of urbanisation (as in stratification), 14 age groups and sex as well as in NUTS 3 (6 regions) and 3 age groups. All persons within the same household have equal initial weights, but the final weights tend to be diverse.

Data collection

Face-to-face interviews using portable computers (CAPI) and telephone-assisted interviews (CATI) are conducted by interviewers of the Interviewers' Coordination Section. The interview is normally carried out during the week immediately following the reference week. In 2010, 41.7% of the interviews of persons aged 15-74 years were given through a proxy.

The average response rate in 2010 was 67.1%. Refusals accounted for 39% of the total non-response.

Major changes in recent years

2006:

- Data collection mode changed from PAPI (paper and pencil interviewing) to CAPI.

- Changes to the questionnaire to match more closely the EU-LFS definition of unemployment.

2007:

- Sample size more than doubled, from 2 574 to 6 032 households.
- Rotation scheme changed from 1-(1)-1-(1)-1 to 2-(2)-2.
- More efficient use of auxiliary variables in weighting procedure.
- Since the 2nd quarter, CATI interviewing introduced in combination with CAPI.

2010: The weighting at household level was introduced.

LITHUANIA (LT)

General

The Lithuanian LFS started in April 1998 as a semi-annual survey with one reference week in both the second and fourth quarter.

Since the third quarter of 2002 the redesigned survey has been a continuous one.

The survey covers the whole country. Private households are surveyed.

Participation in the survey is voluntary.

The target population comprises all persons usually living in the households of the selected dwellings, including those who are temporarily abroad for a period of less than a year. The population also includes foreign nationals who have been living in Lithuania for at least a year.

For each of the quarterly periods, the reference weeks are distributed uniformly over the 13 weeks.

A private household comprises either persons living alone or two or more persons, whether they are of the same family or not, who usually occupy the same dwelling and share a common budget. Only the members of the selected private households (family) are interviewed.

Sampling plan

The survey base is the Population Register.

The sampling design is a stratified single random sample from the sampling frame.

The sampling unit is the person living in the private household. All household members are surveyed.

The sampling plan is a one-stage simple random sample of about 7 700 households per quarter aged 15 years and over, using the Population Register as a sampling frame.

The sampling rate size per quarter is approximately 0.67% of the population aged 15 years and over.

The sample is constructed as follows: having selected a simple random sample of the fixed number of persons of the sampling frame, the members of their households are also added. Even if it turned out that, according to the address sampled, some or all of the people were not included in the list of the sample, all household members actually living at the address are interviewed. A cluster sample of persons is thus obtained. All the persons living at the address selected belong to the same cluster. The actual composition of the cluster is indicated by the interviewer when visiting the household.

A rotation system comprising four waves is used. Each dwelling is kept in the sample for four quarters and one-fourth of the sample is replaced each quarter. The rotation pattern is 2-(2)-2.

Weighting procedure

The weighting method for the Lithuanian LFS is based on the generalised calibration method introduced by Deville and Särndal in 1992. The initial household design weights are calculated, taking into account the unequal selection probabilities of the households. These are then adjusted by the use of auxiliary information relating to population data on 10 NUTS 3 (counties) and the intersection of 13 age-groups, sex and urban/rural. Each member of the household receives the same weight as the household.

Data collection

Since Q4 2007, CAPI (Computer-Assisted Personal Interviewing) has been introduced in addition to PAPI (Paper and Pencil Interviewing). For the first wave, respondents are interviewed face-to-face, while during the subsequent waves, interviews are conducted by telephone or face-to-face according to the circumstances. The interview normally takes place during the week immediately following the reference week but never later than five weeks after the reference week.

In the second quarter, when the ad hoc module is surveyed, most of the interviews are face-to-face.

The interview duration is on average about 20 minutes in the first interview and shorter in the subsequent interviews. If the target persons selected for the sample cannot be reached, a proxy may be used on certain conditions.

The average response rate in 2010 was 83.8% Refusals accounted for 42.8% of the total non-response.

Approximately 34.8% of the interviews of persons aged 15 years and older were by proxy.

Major changes in recent years

- 2006: Labour Exchange data (i.e. the registered employment/unemployment status) no longer used as auxiliary information for calculation of weights.
- 2007/2008: Gradual increase of the theoretical sample size from 4 000 households in 2006 to 7 000 in 2007 and to 8 000 in 2008.

LUXEMBOURG (LU)

General

In 2003, a new survey design was launched for the Luxembourg LFS, which is characterised by continuous data collection by telephone interviews, replacing the annual spring survey dating from 1983.

The survey yields annual results as an average of the whole year. Since 2007 the survey has been providing quarterly and annual results. The resident population comprises persons registered as residing in one of the communes.

There is no specific legislation making it compulsory to provide information for the survey. Participation is therefore voluntary.

The survey covers only private households. The private household is composed either of persons living alone or of two or more persons, whether or not of the same family, living in the same dwelling.

The demographic part of the questionnaire covers all the household members. The rest of the questionnaire is addressed only to people aged 15 years and over.

Sampling plan

A single stage random sample is applied. From 2009, the Central Population Register is no longer used as sampling frame. Households to be contacted are selected by the procedure of random digit dialling. The sampling units are the households. All the individuals included in the aforementioned households are considered as targets of the survey.

In 2010, the quarterly theoretical sample size is approximately 6250 households, corresponding to a sampling rate of about 3.0%.

No rotational scheme is applied.

Weighting procedure

Population estimates on 1 January are used for weighting the results. Data from the survey are weighted ex post by sex, age classes: 0-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+, nationality: Luxembourgish/foreigner. All persons of these 288 strata have the same weight, calculated by dividing the population in each stratum by the number of interviewed persons in the same stratum.

Data collection

Approximately the same number of households is interviewed during each week of the year. Each selected household should be interviewed within three weeks from the reference week. All the interviews are carried out by telephone. One interview (covering the core variables as well as the ad hoc module variables) lasts an average of 10 to 15 minutes per interviewed person.

In 2010, 37.5 of the interviews of 15-74 year olds were carried out by proxy.

The response rate was 31.4% Refusals accounted for 56% of the total non-response.

Major changes in recent years

2007: Dissemination of quarterly results in addition to annual ones.

HUNGARY (HU)

General

The Hungarian Labour Force Survey started in 1992 as a quarterly survey (until 2002 the reference week in each month was the week which included the 12th day of the month, from 2003 to 2005 three weeks of each month were surveyed). Since the beginning of 2006 the survey is a continuous one, covering all weeks of the year. Interviews are done during the week immediately following the reference week.

The quarterly sample is made up of three monthly sub-samples, producing monthly results with moving average of the last three months for some indicators since 2003. In 2003 the survey was redesigned.

The survey covers the whole country. Only private households are surveyed.

Participation in the survey is voluntary.

The LFS provides labour market information on the non-institutional population aged 15-74 years. Included are household members temporarily absent and persons living abroad if they have common income/consumption with the surveyed household. The institutional and unsettled population is excluded. Demographic information is collected on all persons without age restrictions.

Sampling plan

From 2003 the LFS sample is a multi-stage stratified sample of dwellings based on the 2001 Population and Housing Census. The last update of the sample frame was in 2010.

The LFS sample is stratified by administrative units (i.e. the capital city and 19 counties) and by size categories of the localities. Total number of strata is 275, of which 171 are self-representing localities. The remaining 103 strata contain 513 non-self-representing sampled localities.

At national level, self-representing localities are those which have at least 3 975 dwellings (i.e. approximately 5 000 inhabitants), while all other localities are non-self-representing. The former are all included in the sample with certainty, while a stratified (sub-)sample is selected from the latter with probability proportional to size (PPS). In the case of non-self-representing localities, design strata are defined as cross-classes of four size categories and 19 administrative units (counties). In such cases, the primary sampling units (PSUs) are localities, and the secondary (and ultimate) sampling units are dwellings. By contrast, the PSUs are dwellings in the case of self-representing localities, thus sampling has actually only one stage in this case.

The final sampling units are dwellings in each case. They are selected with systematic random sampling from lists of addresses belonging to the sampled localities. Prior to selection, the lists are properly sorted for the purpose of implicit stratification. As a

result, the different parts of the localities (downtown areas, suburbs, etc.) will be properly represented. All households residing in the selected dwelling units are surveyed.

In the different strata of the LFS sample different sampling rates are used. The overall sampling fraction is 0.92%, yielding approximately 36 200 dwellings per quarter.

The sample has a simple rotation pattern. The households entering the sample provide information for six consecutive quarters, before being rotated out of the sample for good.

Weighting procedure

At the first stage, design (or design-based) weights are determined. For any stratum of the sample, the unique design weight is defined as the ratio of the total number of dwellings in the stratum to that in the sub-sample for that stratum. Some adjustments are also included at this stage.

At the second stage, calibrated weights are determined with the method of generalised raking. For each of the 20 geographical units (i.e. the capital city and the 19 counties), the calibration variables or controls are the following:

- Totals for age-sex groups (2x10 groups),
- Total number of households,
- Total resident population in cities with at least 50 000 inhabitants.

The calibration is organised so that all members in a sample household have the same calibrated weight as that household.

Method of deriving controls: demographic components method combined with census-based proportions.

Data collection

Data are collected by face-to-face (paper/pencil) interviews. First time the respondents are interviewed face-to-face; while during the subsequent time interviews could be conducted according to the situation – by telephone or face-to-face. Interviews are done during the week immediately following the reference week.

The average response rate in 2010 was 84.1%. Refusals accounted for 32.4% of the total non-response. In 2010, 44.3% of the interviews of persons aged 15-74 years were collected by proxy.

MALTA (MT)

General

The Maltese Labour Force Survey started in 2000, providing quarterly results from 2001. The survey was redesigned as a quarterly continuous survey in 2004. At the same time a new sampling frame was introduced.

The survey covers the whole country. Only private households are surveyed.

Participation in the survey is compulsory.

The survey covers private households, including people who are temporarily absent from the usual place of residence.

A household is defined as one or more persons who live together and share expenses. A person who is abroad during the reference week and who visits Malta on a regular basis, i.e. at least two times a year, is considered to be part of the household. Children or any other members who are living in another dwelling or institution are excluded.

Sampling plan

The sampling plan is a one-stage simple random sample of households from the 2005 Census.

The sample is 3 200 households per quarter, with a theoretical sampling rate of 2.25%.

The sample consists of four waves. One fourth of the sample is made up of households who have been selected to participate in the Labour Force Survey for the first time. Three fourths of the quarterly sample is made up of households who were selected to carry out the survey on previous occasions, namely either one quarter before, or one year before, or one year and quarter before. The rotation pattern is 2-(2)-2.

Weighting procedure

Prior to the compilation of weights, calibration was carried out to correct for sample bias arising out of differential non-response and non-representative probabilities of selection.

A posteriori stratification at one level is performed by sex, age-group and district. This allows the tabulation of estimates at national and district levels. The totals are benchmarked to Census Population Totals.

For weighting procedures, NUTS 4 is used, and age groups consist of the ranges 0-14, 15-24, 25-34, 35-44, 45-54, 55-64, and 65+ years.

Data collection

Data are collected with face-to-face or telephone interviews conducted by 45 interviewers. All persons in the household aged 15 years and over are interviewed. Each household is contacted via ordinary mail so that it is informed that family has been chosen to participate in the LFS. An interviewer who is assigned to a group of households carries out the interview in one of two ways i.e. in person or by telephone. Households which are selected for the second to fourth panel are contacted by telephone if a fixed or mobile line is available. An interviewer is sent to those households that do

not provide a telephone number or do not have a telephone line or do not want to be interviewed over the phone.

The average response rate in 2010 was 75.4%. Refusals accounted for 11.6% of the total non-response.

In 2010, 47.7% of the interviews of persons aged 15-74 years were carried out by proxy.

Major changes in recent years

2006: Weighting scheme changed to correct for non-response in successive waves.

2007: Quarterly sample size increased from 2 500 to 3 200 households.

2008: Rotation scheme changed from 2- to 2-(2)-2.

NETHERLANDS (NL)

General

The Dutch Labour Force Survey started in 1987 as an annual survey. In 2000 it was redesigned as a continuous quarterly survey.

The survey covers only private households.

The year is divided into quarters of 13 weeks: January to March, April to June, July to September and October to December.

There is no specific legislation making it compulsory to provide information for the survey. Participation is therefore voluntary.

The resident population comprises persons residing in the Netherlands.

The private household comprises either persons living alone or two or more persons, whether or not they are of the same family, who usually occupy the same dwelling and share a joint budget.

Sampling plan

The survey base is a list of all addresses drawn up by the postal services in combination with the Population Register. All institutions are eliminated from the sample. The file also contains information on the number of letterboxes at each address (mailing addresses), which are used as sampling units.

The sampling plan is a three-stage stratified probability sample of addresses:

- (a) Primary sampling units: the municipalities;
- (b) Secondary sampling units: mailing addresses;

Municipalities are selected with a probability proportional to their population. All municipalities with a population of more than 18 000 persons (of which there are about 200), are permanently represented in the survey.

Mailing addresses are selected systematically out of a mailing list sorted by postal code. At addresses with more than one letterbox, all letterboxes appear in the list. If a selected mailing address includes only one household, this household is questioned. If the address includes more than one household, a maximum of three households are questioned. This makes it possible to increase the effectiveness of the survey. Sixty-six strata are defined using cross-classification based on 40 'Corop' regions and 18 employment-exchange regions.

Each quarter the sample consists of almost 50 000 households, corresponding to a quarterly sampling rate of about 0.7%.

A sub-sample is used to survey the structural variables (for which only yearly results are required) concerning atypical work, previous work experience of person not in employment, main status and education and training successfully completed. The sub-sample is determined according to a wave approach, i.e. it includes the units of each full quarterly sample which, according to the rotation scheme, are interviewed for the second time (2nd wave). This corresponds to one fifth of each quarterly sample. The full sub-sample for the structural variables is thus spread over all the weeks of a year and has a theoretical size of about 40 000 households.

Weighting procedure

Weighting of the respondents is done in two stages. In the first stage all respondents are assigned an inclusion weight. These inclusion weights are calculated in such a way that unequal inclusion probabilities that occur because of the sampling method are corrected. In the second stage final weights are determined. In this stage biases because of non-response are reduced. For this, information on gender, age, ethnic background, place of residence and some other regional classifications are used. In addition, administrative sources on the income and registration at unemployment office are used. Also information on the correlation in the panel-overlap between subsequent quarters is used and all waves together are weighted in one step.

Data collection

The survey is a 5 waves rotating panel.

Since 2010 interviews in the first wave are carried out using mixed-mode. When a telephone number is available people are approached by telephone (CATI). When there is no available telephone number, the approach is face-to-face with the help of portable computers (CAPI). Interviews in the next four waves are carried out by telephone (CATI). In the CATI questionnaire, data previously gathered in the preceding wave (CAPI or CATI) are included. The response rate in 2010 was approximately 79.4%. Refusals accounted for 40.8% of the total non-response.

In 2010, 48.7% of the interviews of 15-74 year olds were by proxy.

AUSTRIA (AT)

General

The Austrian Labour Force Survey covering the whole questionnaire of the European Labour Force Survey started in 1995 as an annual survey in March. In 2004 the LFS was redesigned as a continuous survey, covering all weeks of the year. Key data on employment and unemployment have been collected within the Austrian Microcensus quarterly since 1968, but ILO definitions have been used only from 1994 onwards.

Only the population in private households is included in the European Union Labour Force Survey. Participation in the survey is compulsory.

The resident population comprises persons who have their main residence on Austrian territory during the reference week.

A private household is made up of all people actually living in a dwelling, independently registered in this dwelling or not.

Sampling plan

The survey base is the Register of Residents.

The sampling design is a stratified single random sample from the sampling frame, with each 'Bundesland' forming a stratum.

The sampling unit is the dwelling with at least one person with main residence. All the people in the selected dwellings are surveyed.

The gross quarterly sample size is 22 500 dwellings, corresponding to an average sampling rate of about 0.6%.

A rotation system comprising five waves is used. Each dwelling is kept in the sample for five quarters and one-fifth of the sample is replaced each quarter.

Weighting procedure

For estimation of the results weights are calculated using the population counts of the Register of Residents and the household forecasts of Statistics Austria. The weights are calculated using the following criteria:

- Bundesland (NUTS 2)
- Age groups (0–2 years; 3–5 years; 6–9 years; five-year age groups until 84 years; 85 years and over),
- Nationality (Austrian; EU-14 [i.e. EU15 without the Austrians]; former Yugoslavia; Turkish; other nationalities),
- Size of the households according to the household forecast (1; 2; 3; 4; 5; 6+),
- Gender.

In a first step, a basic weight is calculated for each person. This is followed by a calibration procedure with iterative proportional fitting. Finally each member of the household gets the same weight.

Data collection

Since April 2006, CAPI (computer-assisted personal interviewing) is used in the first wave and mostly CATI (computer-assisted telephone interviewing) in the second to fifth waves.

The average response rate in 2010 was 92.6%. Refusals accounted for 5.8% of the total non-response.

In 2010, 25.1% of the interviews with persons aged 15-74 years were carried out by proxy (interviewing other adult members of the household). Persons younger than 18 years need not answer the questionnaire by themselves.

Major changes in recent years

2006: Replacement of PAPI (paper and pencil interviewing) with CAPI for first-wave interviews.

2010: Last revision of the questionnaire.

POLAND (PL)

General

The Polish Labour Force Survey started in May 1992 as a quarterly survey, using data collection in one reference week per quarter. Since the fourth quarter of 1999 the survey has covered all weeks of the year.

The survey is spread over the whole country. Only non-institutional households are observed.

Participation in the survey is voluntary.

The target population covers all persons aged 15 years and over with usual residence in Poland. Persons living in institutional households (army, hospital, prison, hostels etc.) are excluded from the survey. The same applies to persons living permanently or temporarily (for more than three months) in other countries.

The household is a group of relatives or other people living together and maintaining a joint unit. Persons not belonging to any household and living and managing the household alone are considered as single-person households.

Sampling plan

The sampling plan for the Polish LFS is a two-stage stratified probability sampling of dwelling units.

The sampling frame for both stages of the sample is based on the Census and Register of housing units. The primary sampling units (PSUs) refer with few exceptions to census clusters in towns and enumeration districts in rural areas.

The primary sampling units are stratified by urban/rural division of voivodships (provinces), as well as division within voivodships depending on the size of the place,

with rural areas included among the smallest ones. PSUs are sampled within strata with sampling probability proportional to the number of dwellings in a PSU.

In the second stage a total of 54 704 dwelling units per quarter are sampled from selected PSUs stratified by size of the municipality. This corresponds to an overall quarterly sampling rate of about 0.4%.

The sample is divided into four sub-samples, subject to the rotation scheme 2-(2)-2.

Weighting procedure

The weights are computed using a four-step procedure. First the initial design weights are calculated for dwelling units, i.e., the reciprocals of the selection probabilities for the final sampling units in each stratum. Secondly, the weighted response rates are calculated for sampling units stratified a posteriori by six place-of-residence categories. Thirdly, the initial weights are adjusted by the response rates. The adjusted weights are also final for results concerning households. The final step consists in modifying the adjusted weights using the population estimates stratified a posteriori by the urban-rural division, sex and 12 age groups (15-17, 18-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+) plus three age groups (0-4, 5-9, 10-14) for children living in the surveyed households.

Data collection

The data are collected with face-to-face interviews using paper (PAPI) or electronic (CAPI) questionnaires. Repeat interviews are sometimes carried out by telephone.

The average response rate in 2010 was 72.9%. Refusals accounted for 59.4% of the total non-response.

In 2010, 37.4% of the interviews were by proxy.

Major changes in recent years

2006:

- Introduction of CAPI supplementing PAPI.
- Change to the questionnaire, to better identify people absent from work (identification of lay-offs) and to tie in with the EU-LFS operational guidelines for the definition of labour status.
- Introduction of variable MAINSTAT (self-declared main labour status).
- Calculation of weighting factors for children aged below 15 years.

2008: Increase of the sample size in the seven NUTS 2 areas not meeting the EU-LFS precision requirements.

2009: Questionnaire changed to better align to the EU-LFS operational guidelines for the definition of labour status.

2010: Sample size doubled in order to adjust precision to the requirement set out in Article 3.2.

PORTUGAL (PT)

General

The Portuguese LFS started in 1983 as a quarterly survey. Since 1998, the survey is a continuous one yielding quarterly results.

All the geographical territory of Portugal is covered, i.e. mainland, Madeira and the Azores.

Only private dwellings are surveyed, although the survey also covers part of the population living in collective dwellings and who represent a potential for the labour market, insofar as they have family links with the private dwellings (national servicemen or students).

Participation in the survey is compulsory (in accordance with Law No 6/89, Sistema Estatístico Nacional, of April 1989).

The resident population consists of individuals residing in a private dwelling during the reference week. Individuals who are absent for short periods of time and not occupying another dwelling permanently are also included.

A private dwelling is made up either of persons living alone or of two or more persons, whether or not they are of the same family, who usually occupy the same dwelling and share a common budget.

Sampling plan

The Portuguese LFS uses two-stage cluster sampling where the first stage consists in construction of the 2001 Master Sample (MS2001) that is continuously updated.

The MS2001 is a stratified one-stage cluster sample constituted by private dwellings from the 2001 Census of Population and Housing. In each stratum (NUTS 3 or groups of NUTS 3 regions) the clusters are selected systematically with probability proportional to size (number of private dwellings of usual residence). The sampling frames for the MS2001 are the Census 2001 data and the BGRI-Geographic Information Referencing Base (geographical referencing system supported by digital topographic mapping and aerial photographs, containing the limits of administrative divisions and statistical divisions). The MS2001 consists of 1 408 'geographical areas' and it is representative at the groups of NUTS 3.

After selection of the geographical areas (primary units) of the MS2001, the LFS sample of private dwellings (secondary units) is selected sequentially in two systematic blocs.

All persons living in the same dwelling are interviewed. Despite the survey being directed to the households, the dwellings are the sampling units.

A rotation system comprising six waves is used. Dwellings are kept in the sample for six consecutive quarters before being replaced by an identical number of dwellings in the same geographical area. One-sixth of the sample is replaced each quarter.

In each quarter 22 554 dwelling units are selected, which represents a sampling rate of approximately 0.6%.

Weighting procedure

The weight is derived as the product of a design weight (which incorporates design information and non-response) and a factor that calibrates the sample to the independent demographic estimates (using a posteriori stratification method by NUTS 2, sex and five-year age groups; NUTS 3 (or groups of NUTS 3) by six age groups; and NUTS 3 (or groups of NUTS 3) by sex).

Data collection

Interviews are carried out on a face-to-face basis with the help of portable computers (CAPI). All information is obtained by interview.

Around 48.6% of the interviews of persons aged 15-74 years were carried out by proxy.

The average response rate in 2010 was 83.9%. Refusals accounted for 25.0% of the total non-response.

ROMANIA (RO)

General

The Romanian Labour Force Survey started in 1993 with a pilot survey, followed by two annual surveys in 1994 and 1995. In 1996, a continuous LFS started, providing quarterly results.

The whole country is covered. Only private households are surveyed.

The target population comprises persons resident in Romania. The survey covers all the members of the selected households including persons absent from home for a long period (over six months), if they are preserving family ties with the household to which they belong, such as pupils and students away for purposes of study, persons absent due to work, prisoners and persons temporarily in hospitals for medical cure.

A household is defined as a group of two or more persons, usually living together, being generally relatives, managing the household in common, entirely or partly participating in income formation and spending. A person stating that he or she does not belong to any joint household, and lives and manages the household all by him or herself, is considered as a single-person household.

Sampling plan

The sampling plan is a two-stage probability sampling of clusters of housing units.

Because of the lack of appropriate registers (dwelling register, population register, etc), the household surveys carried out by NSI-Romania are based on the repeated use of a master sample, which also entails the use of multi-stage sampling designs. The LFS sampling design is founded on a two-stage sampling technique.

The primary sampling unit, corresponding to the selection of the master sample, is a group of census sections.

The secondary (ultimate) sampling unit, corresponding to the selection of the survey sample, has been the cluster of three dwelling units.

In the first stage, a stratified random sample of 780 areas, Primary Sampling Units (PSUs), was designed after the 2002 census, using as stratification criteria the residence area (urban/rural) and county (corresponding to NUTS 3 level) – 88 strata in all. This is the Multifunctional Sample of Territorial Areas, known as the master sample EMZOT. The EMZOT sample has 427 PSUs selected from urban areas and 353 PSUs selected from rural area.

In the second stage, 9 360 clusters, composed of three housing units each, are systematically selected from the initial sample of PSUs. The final quarterly sample consists of 28 080 dwelling units each quarter. All households within each sampling unit are included.

The overall quarterly sampling rate, estimated as ratio between number of sampled dwellings, after the two sampling stages, and number of dwellings at country level, is about 0.39%.

Each sampling unit is observed for four quarters according to the rotation pattern 2-(2)-2.

Weighting procedure

The weights are calculated in three steps. The first step assigns the inverse of the selection probabilities to each sampled dwelling unit. The second step adjusts for non-response, categorising the responding dwelling units by the following characteristics: county (NUTS 3) and urban/rural residency. The third and final step consists in calibrating the secondary weights to the best latest available population totals by region / urban-rural residency, gender, 14 age groups (0-14, 15-19, ..., 70-74, 75 and older) and the household totals by region, using the SAS macro Calmar.

In the calculation of weighting factors the totals known at population level from current demographic statistics, based on the 2002 Population Census and updated twice a year (1 January and 1 July), are used. The current demographic statistics used to calibrate the LFS estimates also include the institutional population.

Data collection

The data are collected only by face-to-face interviews using paper questionnaires. Data are collected with identical questionnaires through the whole year. The questionnaire is divided into two parts: dwelling questionnaire and individual questionnaire.

The average response rate in 2010 was 94.3%. Refusals accounted for 21.7% of the total non-response.

In 2010, 27.9% of the interviews of persons aged 15-74 years were by proxy.

Further methodological information

In the case of the self-employed and unpaid family workers in agriculture, the threshold for employment is set at 15 hours in the reference week instead of 1 hour.

Major changes in recent years:

2006: Full and uniform coverage of the weeks of each quarter.

SLOVENIA (SI)

General

The Slovenian Labour Force Survey started in 1993 as an annual survey, using four weeks in May as the reference period. Since the second quarter of 1997 the LFS has been conducted as a continuous survey, providing quarterly results.

The survey covers the whole country. Only individuals in private households are surveyed.

Participation in the survey is voluntary.

Members of the household temporarily absent for a period exceeding 12 months (in hospital, prison, student accommodation) and persons living in other countries are excluded from the survey. Foreign nationals are included, if they correspond to the criteria of household. For the household members up to 15 years old only very few questions are asked.

A household is a single person or a group of persons who live together and share expenses related to common living and eating.

Sampling plan

The sampling frame basis is the Central Population Register of the Republic of Slovenia.

The sampling method is stratified systematic random sampling of addresses. All members of the household at the selected address are included.

Each quarter approximately 16 150 individuals are in the sample, corresponding to an overall quarterly sampling rate of 0.8%.

Strata are defined by NUTS 3 (12) and type of settlement, defined according to the settlement size and proportion of farmers (6). Stratum allocation is proportional to the population distribution, adjusted by previous non-response rates by stratum.

Each household is interviewed five times according to the rotation pattern 3-(1)-2.

Weighting procedure

The data are weighted for unequal probability of selection and for non-response and post-stratified according to the known population distribution: age (0-14, 15-19, 20-29, 30-39, 40-49, 50-59, 60-69, 70+), sex and region (NUTS 3 level). The post-stratification is done on a household level, with members of the same household thus receiving different weights, and benchmarked to population totals. Institutional population is included in population totals.

Data collection

Face-to-face interviews using electronic questionnaires and telephone interviewing are used for the data collection. The first interview is a face-to-face interview at home (CAPI). All repeat interviews are carried out by telephone if the household has a telephone (CATI). Repeat interviews in the households without a telephone are done face-to-face.

The average response rate in 2010 was 79.7%. Refusals accounted for 62.6% of the total non-response.

57.2% (unweighted data) of the interviews (persons aged 15-74 years) were carried out by proxy.

Major changes in recent years

2006: Move to a more uniform distribution of sample and coverage of all weeks of each quarter.

2007: Question on self-declared main labour status moved to the end of the questionnaire, to tie in with the EU-LFS operational guidelines for the definition of labour status.

2008: New definition of resident population introduced.

SLOVAKIA (SK)

General

The Slovakian Labour Force Survey started in 1993 as a continuous, quarterly survey using seasonal quarters. In 2000 the Slovakian LFS moved to calendar quarters.

The whole country is covered. Only private households are surveyed.

Participation in the survey is compulsory.

The target population of the survey is every person aged 15 and over, living in the household of the selected dwelling without regard to permanent, temporary or unregistered stays. Data for students living in hostels, schoolchildren at boarding schools and persons living temporarily in worker homes are collected within the households to which they belong. Inmates of prison or mental institutions, and foreign citizens staying temporarily are not surveyed. From the first quarter of 1997 to the fourth quarter of 2005, conscripts on compulsory military service were included in the LFS.

A household is a group of persons sharing common accommodation and housekeeping budget. Persons living on their own constitute one-person households.

Sampling plan

The sampling design is a stratified two-stage probability sampling of dwelling units, using the Census of Population 2001 as the basis. The sampling frame was last updated

in 2010.

The strata are formed by (79) districts, which correspond to the NUTS 4 level.

The primary sampling units (PSU) correspond to the Census Administrative Units. These are selected at the first sampling stage in each district with probability proportional to the district's population size. Each PSU can be selected more than once.

At the second stage, five dwelling units are selected from each instance of the PSU using a simple random sampling method.

The quarterly sample size is about 10 250 dwellings, representing 0.6% of all permanently occupied dwellings.

Every selected dwelling remains in the survey for five consecutive quarters.

Weighting procedure

Data from the survey for all persons participating in the survey were weighted by administrative data on total population (including institutional population) as of Jan. 1, 2010 (the data of the 1st quarter 2010 were as of the 1st January 2009) by region, sex and age groups. Extrapolation to the population is done at the level of individuals. The average sample size was 22 834 persons (aged 15 and over). The population and the sample are the subject of a post-stratification by NUTS 3 administrative region (8 regions altogether), sex and five-year age groups. In each of the strata thus obtained the weight w_i is assigned to each person in the sample:

$$w_i = \frac{N_i}{n_i}, \text{ where}$$

N_i = the number of persons in stratum i of the population (age 15+)

n_i = the number of persons in stratum i of the sample (age 15+).

Data collection

The data are collected by face-to-face interviews using paper questionnaires. In most cases the repeat interviews are carried out via telephone using paper questionnaires.

The average response rate in 2010 was 93.2%. Refusals accounted for 70.6% of the total non-response.

The average percentage of proxy interviews in 2010 for persons aged 15-74 years was 35.4%

Major changes in recent years

2006: New structure of the national questionnaire.

FINLAND (FI)

General

The Finnish Labour Force Survey (LFS) started in 1959. Finnish LFS data have been delivered to Eurostat since 1995. In the late 1990s various kinds of methodological development took place, and changes were introduced to the Finnish LFS to reflect EU harmonisation. Since 2000 the Finnish LFS is a strictly continuous survey.

The survey is a monthly survey of individuals with the reference weeks distributed uniformly throughout the month. The data for the first two months of each quarter are estimated on the basis of four survey weeks and data for the third month on the basis of five survey weeks. The survey provides monthly, quarterly and annual results.

Participation in the survey is voluntary.

The whole country and the Autonomous Territory of the Åland Islands are covered, as well as both private and collective households.

The target population comprises people aged 15 to 74 who are registered as permanently resident in Finland, including those who are temporarily abroad for a period of less than a year, members of the armed forces, and the institutional population. It also includes foreign nationals who have been living in Finland for at least a year or intend to do so.

The information concerning the household composition and other members of the household are collected in the last (fifth) wave. A household consists of persons who live together, share meals or otherwise jointly use their income.

Sampling plan

The sampling design used in Finland is stratified systematic sampling of elements, having as a sampling frame the total population database maintained by Statistics Finland. It is based on the Population Information System of the Population Register Centre and updated regularly. The population of individuals is divided into strata. The strata are formed according to NUTS 1 regions with over-sampling from the Autonomous Territory of the Åland Islands.

The sampling unit is the individual. The theoretical sample comprises 12 000 persons per month, or 36 000 persons per quarter corresponding to a sampling rate of about 0.9% over the quarter.

In each stratum systematic random selection is applied to the frame sorted according to the domicile code which yields implicit geographic stratification. So far no indication of selection bias due to systematic sampling has been encountered, so the selection procedure can be approximated by simple random sampling without replacement (SRSWOR).

The sample for the household-based study is based on the individuals who participate in the last wave (fifth) of the current study design of the continuous Community LFS. Household members are interviewed throughout the reference year. The reference person is interviewed as usual in the continuous survey. After that the household composition is checked and persons aged 15 to 74 are interviewed.

Because the continuous survey sample frame only includes persons aged 15 to 74 years, a separate sample of dwelling units was drawn to correct the frame for elderly persons. A technical sample of persons aged 75 or more was added to the file of the fifth wave after data collection. This technical sample corrects the sampling frame, which in the continuous LFS is limited to persons aged 15 to 74 years. However, this technical part of the sample is not interviewed. Instead, data are imputed on the assumption that persons aged 75 or more are outside the labour force, together with data available from administrative files.

Thus, in the LFS sample there are two sets of persons aged 75 or older for all four quarters of the reference year. One part comes from the household interviews and the second part from the technical sample of households (dwelling units), added to the file after data collection, where all persons are at least 75 years old. For this group, variables to determine the ILO labour status are imputed so that this results as inactivity. As for the other variables, only data available from administrative files are incorporated. The technical sample is needed because the original LFS sample does not include households where all persons are at least 75 years old.

Each person is to be interviewed five times in the panel in the course of 15 months. The monthly LFS has a rotating panel design with the varying rotation scheme and after a person reaches the fifth interview, he/she will be automatically dropped from the rotation scheme. In the first month the person is in the panel in wave one and, after a two-month break, the person will be interviewed in the second wave, and so on. The rotation pattern is 1-2-1-2-1-5-1-2-1, where '1' means that a person is in the panel, '2' and '5' mean the break months for that person. Thus the period between the interviews of a sample person is three months, except between the third and the fourth interview when it is six months. This corresponds to a quarterly rotation pattern of 3-(1)-2 and monthly rotation of 1-(2)-1-(2)-1-(5)-1-(2)-1.

A sub-sample is used to survey some structural variables (mostly on relations between household members, atypical work, reasons for leaving last job/ not seeking employment/ not being available to start work within 2 weeks, situation one year before, and others) in Commission Regulation (EC) 377/2008, for which only yearly results are required. The sub-sample is determined according to a wave approach, i.e. it includes the units of each full quarterly sample which, according to the rotation scheme, are interviewed for the fifth and last time (5th wave). Thus the full sub-sample for the structural variables is spread over all the weeks of a year and has a theoretical size of about 28 800 persons.

Weighting procedure

A. Weighting of individuals

Step 1 - Post-stratified weights: The 252 post-strata are constructed by sex (2), age group (6) and region (21).

Step 2 - Calibrated weights: The post-stratified weights are calibrated according to gender, age group, region, reference week and status in Ministry of Labour's job-seeker register.

B. Weighting of the sub-sample of households

Step 1 - Post-stratified weights: The post-stratified weights are calculated separately for the household sample part and the technical sample of households (all persons in the household who are aged 75 or more).

i) Post-stratified weights for the household sample are adjusted corresponding to the population numbers of the survey quarter in the age groups 15-74 years by region (21).

ii) Post-stratified weights for the technical sample of households (all persons in the household who are aged 75 or more) are adjusted corresponding to the population numbers of the survey quarter in the age 75 or more by gender post-strata.

The combined post-stratified weights are composed from these two parts.

Step 2 - Calibrated weights:

The combined post-stratified weights are calibrated according to region, household size, gender, age group, register-based job-seeker status taken from an administrative register maintained by Ministry of Labour and the following estimates from the full sample of individuals: employment and unemployment status by gender and age group, level of education by gender and number of employees by gender.

C. Weighting of the sub-sample of structural variables (wave approach)

Step 1 - Post-stratified weights: The 252 post-strata are constructed by sex (2), age group (6) and region (21).

Step 2 - Calibrated weights: The post-stratified weights are calibrated according to employed, unemployed and inactive population by age/sex groups, region and status in Ministry of Labour's job-seeker register. Thus the sub-sample are adjusted corresponding to the whole sample estimates for employment, unemployment and inactive population by sex and for the following age groups: 15-24, 25-34, 35-44, 45-54, 55+.

Data collection

The Labour Force Survey is based on a computer-aided telephone interview using decentralised computer-assisted telephone interviewing (CATI). Interviews are carried out in Finnish, Swedish and English. Demographic information (sex, year of birth, marital status, nationality) and information about highest level of completed education or training, and field of education are obtained from administrative sources (Population Register, Register of Completed Education and Degrees).

4.1% of the interviews of 15-74 year olds were carried out by proxy.

The average response rate was 78.0% in 2010. Refusals accounted for 64.4% of the total non-response.

Major changes in recent years

2007: Implementation of the wave approach.

2008: Extension of the wave approach. Redesign of the questionnaire to tie in with Regulation 430/2005.

SWEDEN (SE)

General

The Swedish Labour Force Survey started in 1959, with a quarterly survey introduced in 1963 and a monthly survey in 1970. From 1993, the reference weeks are distributed uniformly throughout the year and the survey provides monthly, quarterly and annual results. In April 2005 a new questionnaire was introduced, together with a full renewal of the sample.

Participation in the survey is voluntary.

Through sampling of individuals, persons living in both private and collective households are covered. Persons living in a collective household are also recorded in the central population register and are therefore sampled as well as persons living in private households.

The resident population for the purposes of the survey comprises persons between the ages of 15 and 74 who are domiciled in Sweden according to the population register.

A household is either a person that lives alone or persons that live together and share household expenses. Members of the household are included in wave 8 (the last wave) according to EU definitions of economic households.

Sampling plan

The sampling design is a stratified single stage simple random sampling of individuals.

The sampling frame is Statistics Sweden's Register of the Total Population, which also contains auxiliary information on sex, age and region (county).

The sample is drawn at the end of the fourth quarter every year to cover the coming year's need in terms of new sample persons. When the sample is drawn it is stratified according to county, sex, and age group (14-15, 16-64, 65-74). Individuals that are under 15 years won't participate until they have turned 15 years. In this way 144 strata are constructed. The inclusion probabilities are in general proportional to the size of the strata, although some small counties have to be overrepresented in the sample. The age groups 14-15 and 65-74 are drawn with smaller proportions. The inclusion probability for individual k on a certain survey occasion is calculated approximately as:

$$\pi_k = \frac{n_{h_j}}{N_{h_j}}, \text{ where}$$

n_{h_j} = The number of individuals in the sample that belong to sample stratum h and to the year's sample j .

N_{h_j} = The number of individuals in the population in stratum h at sample selection occasion j .

The inclusion probabilities for individuals in a monthly sample vary primarily with the share of the current sample that consists of the total sample in a month. Every month samples from two or three different years are represented.

The theoretical quarterly sampling rate is approximately 1.2%. The quarterly sample is made of three independent monthly samples of about 29 500 persons each. Every

monthly sample consists of eight rotation panels (waves), of which 7/8 recur after three months and 1/8 is replaced by new individuals. Persons in the sample are interviewed once a quarter with a total of eight interviews during a two-year period, after which they leave the sample. Due to the introduction of the new Swedish LFS as from April 2005 there was a break in the rotation as no persons sampled for the old LFS were allowed to continue being interviewed in the new LFS. This meant that a majority of the respondents in April 2005 were interviewed for the first time, although they were assigned to different rotation panels.

Weighting procedure

The estimates build on regression estimators (GREG) with a set of auxiliary information. The auxiliary variables are: sex*age (13 age groups), region (NUTS 3), nationality at birth, information on employed persons by industry and persons who have enrolled at a job-centre as unemployed and are looking for work. The registers which are used to obtain the auxiliary variables are the Register of Total Population (RTB), the Employment Register (SREG) and the National Labour Markets Board's Register of job-seekers (SOK). The estimator is a generalised regression estimator (GREG) briefly described below:

From a given sample design we have a sample s with a sample size n_s . A part r of size m_r are respondents. A GREG estimator for a total, based on data from this sample, is:

$$\hat{t}_y = \sum_r w_k y_k$$

where

\hat{t}_y = Estimate of a total, e.g. number of employed

$$y_k = \begin{cases} 1 & \text{If the individual has the characteristic in question} \\ 0 & \text{Otherwise} \\ w_k & \text{Final weight} \end{cases}$$

$$w_k = g_k \times d_k,$$

$$d_k = 1 / (\pi_k \hat{\theta}_k) = \text{Design weight with respect to non-response.}$$

$$\pi_k = \text{Inclusion probability for individual } k$$

$\hat{\theta}_k$ = The estimated probability of being a respondent for individual k , $\hat{\theta}_k = \frac{m_h}{n_h}$ when k belongs to stratum h .

$$g_k = 1 + (\mathbf{t}_x - \hat{\mathbf{t}}_x)' \left(\sum_r \frac{\mathbf{x}_k \mathbf{x}_k' q_k}{\pi_k \hat{\theta}_k} \right)^{-1} \mathbf{x}_k q_k. \text{ Correction factor by using the auxiliary information}$$

$\mathbf{x}_k = (x_{1k}, \dots, x_{jk}, \dots, x_{jk})'$ is a vector for auxiliary information of length J .

q_k is a known constant.

$\mathbf{t}_x = (t_{x1}, \dots, t_{xj}, \dots, t_{xj})$ is a vector of length J consisting of known register totals.

$\hat{\mathbf{t}}_x = (\hat{t}_{x1}, \dots, \hat{t}_{xj}, \dots, \hat{t}_{xj})$ is a vector of estimates of the elements in vector \mathbf{t}_x . Where the estimate of a given element t_{xj} is given by:

$$\hat{t}_x = \sum_r d_k x_k$$

The variance for \hat{t}_y is estimated as

$$\hat{V}(\hat{t}_{yGREG}) = \sum_r \sum_r \frac{\pi_{kl} \hat{\theta}_{kl} - \pi_k \hat{\theta}_k \pi_l \hat{\theta}_l}{\pi_{kl} \hat{\theta}_{kl}} w_k e_k w_l e_l$$

where

π_{kl} is the second order inclusion probability,

$\hat{\theta}_{kl}$ is the estimated probability that k and l belongs to r (i.e. the respondents), $\hat{\theta}_{kl} = \frac{m_h m_h - 1}{n_h n_n - 1}$,

$k \neq l$ and

$$e_k = y_k - \hat{\mathbf{B}}' \mathbf{x}_k, \mathbf{B} = \left(\sum_r \frac{\mathbf{x}_k \mathbf{x}_k' q_k}{\pi_k \hat{\theta}_k} \right)^{-1} \sum_r \frac{\mathbf{x}_k y_k q_k}{\pi_k \hat{\theta}_k}$$

Data collection

The information is, for the most part, collected in telephone interviews by Statistics Sweden's interviewers. Interviews are conducted using computer-assisted telephone technology. Data on sex, age, region, country of birth, industrial code, level and field of education and years of residence in Sweden are collected from administrative registers.

In 2010, less than 3.0% of the interviews of 15-74 year olds were proxy interviews.

The average response rate in 2010 was 76.2%. Refusals accounted for 46% of the total non-response.

UNITED KINGDOM (UK)

General

The survey started in 1973 as a biennial survey (not using the ILO definition of unemployment). It was redesigned in 1984 as an annual survey and from 1992 as a continuous, quarterly survey.

The survey covers private households and includes persons who are temporarily absent. Students living in university accommodation (e.g. halls of residence) are sampled via their parents living in private households. In Great Britain, an additional sample is drawn to cover persons living in National Health Service/Hospital Trust accommodation.

The UK LFS is a voluntary survey.

In general, the resident population comprises persons who regard the sample address as their main address. However, persons who have lived in a dwelling during the reference week are considered as members of the resident population, even if they do not regard this as their principal dwelling, unless they are staying in the UK only for the purposes of recreation, holiday, visits to friends and relatives, business, medical treatment or religious pilgrimage, and who remain(s) resident abroad. Such cases are not included in the UK LFS.

A private household comprises one or more persons whose main residence is the same dwelling and/or who share at least one meal per day. Students aged 16 + who live in a collective household but who return to their parents for the holidays are also regarded as being a member of their parents' household.

The year is divided into quarters of 13 weeks: Q1 (January to March), Q2 (April to June), Q3 (July to September) and Q4 (October to December). For each of these periods, the reference weeks are distributed uniformly over the 13 weeks.

Labour market information is gathered for all persons who have reached 16 years of age.

Sampling plan

The sampling design is a stratified single stage systematic (single random in Northern Ireland) probability sampling.

The survey unit is the postal address (the telephone number in the far north of Scotland). For most of Great Britain, the survey base is the Royal Mail's PAF (Postcode Address File), a database of all addresses receiving mail. The list is limited to addresses receiving fewer than 50 items of post per day, in order to exclude businesses. Because of the very low population density in the far north of Scotland (north of the Caledonian Canal), interviews are carried out exclusively by telephone with telephone directories being used as sampling frames. In Northern Ireland, the *Rating and Valuation List* (which serves for the administration of land taxes) is used.

Most of Great Britain constitutes one stratum, while the far north of Scotland forms a separate stratum and Northern Ireland three strata: Belfast and eastern and western Northern Ireland.

In Great Britain, a systematic sample is drawn each quarter from the three sampling bases, which yields 16,640 PAF addresses, 80 telephone numbers for the north of Scotland and nine units of National Health Service housing. As the PAF is broken down geographically, the systematic sampling ensures that the sample is representative at regional level. In Northern Ireland, a simple random sample is drawn, each quarter, from each of the three strata, giving 650 addresses in all. Additionally, 260 additional ('booster') new addresses are added to the sample in Quarter 2 of each year; these are spread equally across the five waves. Thus, in any one quarter, a total of about 17,380 addresses are newly-selected in the UK for the main LFS (excluding the Northern Ireland boosters).

The number of selected households in a given quarter is about 86,900 in Great Britain, representing about 0.33% of the GB households.

Two changes were made to the sample design in 2010 that mean the LFS samples in Great Britain and also in Northern Ireland are strictly no longer equal probability samples, although the effect of the changes is relatively small. These changes relate to multiple-occupancy addresses and to households found that have only adults aged 75 plus. A rotation system comprising five waves is used. Respondents are questioned five times at 13-week intervals and one-fifth of the sample is replaced each quarter.

A sub-sample is used to survey some structural variables (mostly on atypical work, the

situation one year before, and others) under Commission Regulation (EC) No 377/2008, for which only yearly results are required. The sub-sample is determined according to a wave approach, i.e. it includes the units of each full quarterly sample which, according to the rotation scheme, are interviewed for the first time (1st wave). This corresponds to one fifth of each quarterly sample. The full sub-sample for the structural variables is thus spread over all the weeks of a year and has a theoretical size of about 68 000 addresses.

Weighting procedure

The adjustment procedure is based on a three-stage a posteriori stratification. In each case, figures are based on independent demographic estimates.

- (a) The stratification variable for the first stage is the *Local Authority District or Unitary Authority*. This stage makes it possible to make adjustments for different rates of non-response in the various local authority areas and ensures that the results are geographically representative.
- (b) The second-stage variables are sex and age group (0-15, each year of age in the 16-24 group and 25 +). This stratification is intended to ensure that the age profile of the 16-24 year olds is correct at national level.
- (c) The variables in the third stage are region, sex and five-year age group.

The three stages are applied by means of an iterative procedure designed to ensure that the estimates are consistent with the stratification variable sets.

Data collection

Interviews are carried out on a face-to-face basis with the help of portable computers (CAPI) for the interviews in the first wave. In the far north of Scotland (north of the Caledonian Canal) and for interviews in the second to fifth waves wherever possible, interviews are carried out by telephone (CATI). All information is obtained by interview.

Results for respondents who are not contacted in waves 2 to 5 or who refuse for circumstantial reasons are carried forward from the previous wave if an interview has been carried out in the previous wave.

34.3% of the interviews of persons aged 16-74 years in 2010 were carried out by proxy.

The average response rate in 2010 was 58.7%. Refusals accounted for 81% of the total non-response.

Major changes in recent years

2006: Move from seasonal to calendar quarters.

2007: Redefinition of some NUTS 2 regions.

2008:

- Change of residency rules (i.e. the six-month residency rule removed from household surveys), in order to improve coverage of short-term migrants and temporary foreign workers;

- Implementation of the wave approach.

2010: Adaptations to the sample design relating to multiple-occupancy addresses and to households that have only adults aged 75 plus.

ICELAND (IS)

General

The survey started in 1991 as a semi-annual survey. Since 2003 the survey has covered all weeks of the year uniformly, providing quarterly results.

The survey covers persons aged 16-74 years in both private and collective households.

The resident population comprises persons registered with domicile in Iceland, excluding persons attached to foreign missions and registered persons living abroad for more than six months, but including Icelandic personnel in missions abroad.

Participation in the survey is voluntary. The definition of private household used is that of housekeeping unit.

Sampling plan

The sampling plan is a one-stage simple random sample without stratification.

Each quarter one fifth of the sample is renewed by a single random sample without replacement of persons younger than 75 in the first week of the quarter and older than 16 in the last week at the end of the rotation cycle.

The quarterly sample is sorted according to sex, age and residence and then allocated systematically (with random start) to the 13 weeks of the quarters so that each week is representative of the total sample by age, sex and residence. A person younger than 16 on the last day of the reference week is not included in the weekly sample until this age is reached.

The survey frame is the National Population Register; all persons aged 16-74 years with domicile in Iceland.

The sample size each quarter is 4,030 individuals, giving an average sampling rate of about 1.9%.

The sampling unit is the individual. The household sub-sample is selected from the fifth and last wave so that the sampling probability is inversely proportional to the number of persons aged 16-74 years in the household of the drawn individual.

The survey follows a rotating panel sample design, according to the rotation design 3-(2)-2.

Weighting procedure

The *a posteriori* stratification variables are five-year age groups and sex.

The weighting factors are calculated as follows:

$$w = N(sa)/[n(sa) + n'(sa)]$$

where N = population, s = sex, a = age, n = sample size and n' = estimated over-coverage (i.e. registered persons living abroad for more than six months as detected in the field work).

Data collection

Interviews are carried out by telephone with the aid of computers (CATI). Information on sex, age, years of residence, citizenship and marital status is obtained from administrative sources (National Population Register).

In 2010, 2.6% of the interviews were carried out by proxy.

The average response rate in 2010 was 82.6%. Refusals accounted for 38% of the total non-response.

NORWAY (NO)

General

The Norwegian labour force survey started in 1972 as a quarterly survey. From 1996, the survey has been designed as a continuous survey providing quarterly results.

It covers private and collective households

Participation in the survey is compulsory.

The definition of household used is concept of housekeeping unit (i.e. persons living in the same dwelling with joint board).

The definition of resident population is the *de jure* one based on the Central Population Register.

Sampling plan

Inhabitants in all municipalities are randomly selected, on the basis of a register of family units. Each family member aged 15-74 participates in the survey answering questions about their situation during a specified reference week (the lower age limit to be included in the sample was changed from 16 to 15 from 2006).

The sampling frame is based on the Central Population Register, which is continuously updated by the local population registration offices. The sampling frame is stratified according to county (NUTS 3 regions).

Each quarter the sample approximately consists of 24 000 persons (12 000 families), corresponding to a sampling rate of about 0.7%.

Each family participates in the survey 8 times at 3-monthly intervals during a period of 8 (subsequent) quarters.

A sub-sample is used to survey some of the structural variables (mostly for atypical work, reasons for leaving last job/ not seeking employment/ not being available to start

work within two weeks and others) under Commission Regulation (EC) No 377/2008, for which only yearly results are required. The sub-sample is determined according to a wave approach, i.e. it includes the units of each full quarterly sample which, according to the rotation scheme, are interviewed for the first and for the eighth and last time (1st and 8th wave). Thus the full sub-sample for the structural variables is spread over all the weeks of a year and has a theoretical size of about 24 000 persons.

Weighting procedure

The estimation is done by a post-stratification method using information from the Central Population Register, the Register of Employees and the Tax Register. The expansion factors are calculated according to the population totals aged 15-74, i.e. the institutional population included.

Data collection

Interviews are carried out by telephone (CATI). Information on age, sex, county of residence, children below 15 years, nationality and years of residence is obtained from administrative sources (population register).

In 2010 15% of the interviews were carried out by proxy.

The response rate in 2010 was approximately 85.0%. Refusals accounted for 16.8% of the total non-response.

Major changes in recent years

2006:

- Redesign of questionnaire for improved EU comparability of ILO labour status.
- Lower age limit moved to 15.
- Implementation of the wave approach.

SWITZERLAND (CH)

General

The Labour Force Survey in Switzerland was carried out for the first time in 1991 as an annual survey. It was conducted in the second quarter of each year (April-June), having as the reference week the week before the interview. In 2010 the LFS was redesigned as a quarterly survey, providing results as quarterly average. The survey population consists of all persons living in private households aged 15 years and older. The Swiss LFS covers only the permanent resident population in Switzerland and excludes some categories of foreign persons. The permanent resident population includes all persons officially residing in Switzerland for the entire year. Swiss citizens, foreign citizens holding a permanent residence permit or a residence permit valid for at least one year, international civil servants, diplomats and their family members all fall into this category.

Only private households are covered. The LFS is conducted as a household/person survey meaning only one person per household is selected for the interview.

Participation in the survey is compulsory.

A household comprises either a person living alone or two or more persons, whether or not they are of the same family, who usually occupy the same dwelling (dwelling concept).

Sampling plan

Since 2003 the Swiss LFS is divided into two parts:

- a) Standard sample (2010: 107 416 persons). The base used for the standard sample comes from the registered phone numbers, which at present covers more than 90% of the Swiss population.
- b) Extra sample of foreign persons (2010: 22 161 persons). The base used for the extra sample is the register of foreign persons in Switzerland. The register allows the sample to be stratified according to individual characteristics (region, nationality).

The samples (standard, foreign persons) are stratified by canton and the number of persons (population) by canton.

The sampling unit is the household for the standard sample (but only one person is interviewed per household); in the extra sample the sampling unit is the individual (as it is selected from the register of foreign persons).

The quarterly sample design consists of approximately 39 000 persons, which represents a sampling rate of about 0.6% (per quarter) of the population aged 15 years and older.

In the LFS a rotation system comprising four waves is used. Each unit (person) is interviewed four times on 15 months following the 3-9-3 pattern (the 1st interview is followed by a 2nd interview three months later, the 2nd interview is followed by a 3rd interview nine months later, the 3rd interview is followed by a 4th interview three months later). The size of the first wave is normally 28-30% of the total sample size.

Weighting procedure

The weighting procedure is based on a two-phase process: At first the base weights are obtained as the reciprocal of the inclusion probability of the sample units. Then the sample is stratified *a posteriori* by region (NUTS 3), marital status, five-year age groups, sex, nationality groups (North-EU, South-EU, West-Balkan, Other). This procedure is applied iteratively. The expansion factor is a factor to total population (aged 15 and over).

Data collection

Interviews are carried out by telephone (CATI). In the CATI questionnaire, data previously gathered in the preceding wave are included. The questionnaire exists in four languages (German, French, Italian and English). All information is obtained by interview.

2.0% of the interviews were carried out by proxy.

The response rate in 2010 was 82.9%. Refusals accounted for 13.9% of the total non-response.

Major changes in recent years

2010: Shifting from an annual to a quarterly survey and making the participation compulsory.

CROATIA (HR)

General

The Labour Force Survey in Croatia was carried out for the first time in November 1996 and in June 1997. From 1998 to 2006 the survey was semi-annual, i.e. data were processed and published each half-year. Interviews were carried out every month on a part of the total sampled households. Since 2007 the Survey is a continuous one, i.e. interviews cover all the weeks of the year, producing quarterly results.

The Labour Force Survey covers the whole country. The target population comprises all persons who usually reside in Croatia or intend to stay in Croatia for at least 12 months. Only private households are surveyed and participation is voluntary. Excluded from the survey are household members living at some other address where they work or go to school for more than 12 months, as well as temporarily present members of another household. The Survey does not cover collective households such as student homes, convents etc.

The household is a small economic group of persons that is usually, although not always, a group of relatives living together and sharing costs of living (housing, food, etc.).

Sampling plan

The sampling design is a two-stage stratified sample. First-stage sampling frame is a list of area units called segments. Segments are created from one or more neighbouring 2001 Population Census areas and they do not cross borders of municipalities. Second-stage sampling frame is a list of 2001 Population Census dwellings within selected segments. Dwellings on sampling frame are those in which one or more private households were found in Population Census 2001. All members of all private households in dwellings are interviewed.

Segments are selected by PPS systematic sampling, where measure of size of segment is number of private households in segment according to Population Census 2001. They are used for a whole year. Within selected segments, dwellings are selected by simple random sampling. Since 2007 the LFS is a continuous quarterly survey. After selecting a sample of segments, 13 (number of weeks in a quarter) non-overlapping sub-samples of segments are selected from sample of segments by systematic sampling (for every week in the quarter).

The sample is divided into 21 strata using proportional allocation. The strata are 20 counties and City of Zagreb area.

The sample unit are dwellings. In each quarter, the sample consists of 5616 dwellings, corresponding to a quarterly sampling rate of about 0.39% of inhabited dwellings (according to Census 2001). All members of all private households permanently living in these dwellings are interviewed. In selected dwellings 4.800 households were contacted.

Since 2007, a 2-(2)-2 panel component has been introduced in the sample design and households are interviewed four times. They are interviewed in two consecutive quarters, left out in the following two quarters and interviewed again in two consecutive quarters.

Weighting procedure

The weights are calculated in several steps.

First, design weights are calculated as the inverse of overall sampling probabilities. Sampling probabilities for persons are sampling probabilities for segments times sampling probabilities for dwellings times 1 (all households are selected) times 1 (all persons are interviewed). (Obviously, design weights for dwellings, households and persons are the same.)

Secondly, the non-response weights are calculated using the weighting classes method. There are 57 weighting classes. In Croatia, municipalities are officially divided into two groups, according to the level of urbanisation. Weighting classes are 17 city quarters in City of Zagreb, and, in each of 20 counties, two groups of two types of municipalities. (There is no other information on the sampling frame that can be used for adjustment for non-response.) Non-response weights are inverses of weighted response rates (response rates are weighted by design weights).

Overall weights are design weights times non-response weights. At each weighting stage and in each stratum, weights are scaled to the number of persons aged 15 or over in the sample, which is the population of interest. This ensures that for each stratum the mean weight is 1 and that non-weighted and weighted numbers of persons aged 15 or over are the same.

At the end, two sets of weights are calculated, multiplying weights by two different factors. One set of weights, i.e. persons' weights, ensures that estimates of total numbers of persons are the same as numbers of persons in private households obtained from the Department for population statistics. The other set of weights, i.e. households' weights, ensures that estimated numbers of households are the same as numbers of households obtained from the Department for population statistics. The second set of weights is only used for estimating certain variables.

Data collection

Data are collected by face-to-face interviews, using paper questionnaires.

In 2010 the average response rate was 77.5%. Refusals accounted for 52.8% of the total non-response.

In 2010, 43% of the interviews of persons aged 15-74 years were by proxy.

Major changes in recent years

2007:

- Move to a continuous survey,
- Data available at NUTS 2 level,
- Quarterly results available,
- Yearly sample size doubled,
- Rotation scheme changed to 2-(2)-2.

FORMER YUGOSLAV REPUBLIC OF MACEDONIA (MK)

General

The Macedonian LFS is a household survey, which provides some socio-demographic information on population without age limit and labour market information on the population aged 15-79. The survey covers the whole country. Only private households are surveyed.

The survey applies to all the members of the selected households including persons absent from home for a longer period (over 6 months), if they are preserving family ties with the household to which they belong (military duty; pupils and students away for study; workers; prisoners; persons temporarily in hospitals or sanatoria for medical treatment), and they are surveyed via the relatives living in the selected households. In the case of persons living abroad, they are surveyed only if they are absent up to 12 months. Persons living permanently in collective units (elderly, handicapped, etc.) are not included in the survey.

The reference weeks are all the weeks of the year, evenly spread.

Starting with 2004, the labour force survey is conducted as a continuous quarterly survey throughout the year. The survey provides quarterly and annual (averages) results.

Participation in the survey is voluntary.

Sampling plan

The Labour Force Survey is based on a two-stage stratified sample design. The sample design strata are defined in terms of geographic regions, area types (i.e. urban and rural) and size of enumeration districts (ED).

The sampling frame is 2002 Population and Housing Census. Primary sampling units (clusters) are ED, whereas households constitute the final sampling units.

In each sampled ED, a fixed number of households (8) is selected with random sampling. The final quarterly sample consists on the whole of 5 000 households and is

made up of three monthly sub-samples⁴. There is no overlap between monthly sub-samples.

The overall sample size per quarter is approximately 5 000 households, which represents an average quarterly sampling rate of about 0.9%, estimated as a ratio between number of sampled households after the two sampling stages, and total number of households at country level.

The LFS sample is stratified in eight regions, by types of locality (urban & rural) and by size of the ED. Total number of strata is 32.

Rotation model 2-(2)-2 is applied in the sample of LFS. The households are interviewed in two consecutive quarters and provide labour market information, then omitted in the next two quarters, then included again for another two quarters, after which they leave the sample. The above rotation model results in an overlap of 1/2 between consecutive quarters and an overlap of 1/2 between the same quarters in two consecutive years. At any time, the sample is made up of a panel of new entrants (1/4 of sample), which is interviewed for the first time, and of three panels of units previously surveyed.

Weighting procedure

Data are weighted for unequal probability of selection. The first step assigns the inverse of the selection probabilities to each sampled household unit. In the second step design weights are then adjusted for non-response by multiplying the basic weights by inverse of response rate at strata level. The third and final step consists in calibrating the secondary weights to the best latest available regional population totals for gender and 15 age groups, and to the estimated number of households at regional level and to the estimated number of households by size at national level. The post-stratification is done at household level (the members in any sampled households have the same calibrated weight as the household). In the calculation of weighting factors the totals known at population level from current demographic statistics at regional level, recalculated on 2002 Census population, are used.

The sample population in private households is not expanded to the total population (i.e. the population in collective households is not included).

Variables used for weighting are: sex, 15 age groups (0-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80+), regions (NUTS 3), estimated number of households at regional level and estimated number of households by size at national level.

Data collection

Data are collected by face-to-face paper and pencil interviews (PAPI). Interviews are done during the week immediately following the reference week. Data are collected with identical questionnaires through the whole year.

The questionnaire is divided into two parts, a household questionnaire and an individual

⁴ Annual sample is defined by pooling the quarterly samples and dividing the quarterly weights by four. All data on the sample reflect this concept which implies that, owing to rotation, a specific unit can occur in the annual sample once or twice.

one.

In 2010 the average response rate was 86.9%. Refusals accounted for 46.0% of the total non-response. In 2010, 44.5% of the interviews of persons aged 15-74 were by proxy.

Major changes in recent years

2006: Delivery of microdata to Eurostat.

TURKEY (TR)

General

The Labour Force Surveys in Turkey started in 1966, while regular annual Labour Force Surveys applying ILO recommendations started in October 1988. The Turkish LFS was carried out in April and October each year from 1989 to 1999 with major changes in design introduced in October 1994. In 2004 the questionnaire was revised to conform to the Eurostat regulation. From 2000 onwards the survey has produced quarterly results, and from 2005 monthly results using moving 3-month averages.

The survey covers the whole country. Only private households are surveyed.

The population surveyed comprises all persons in the country excluding residents of collective households. The small villages with less than 1% of the country population are not covered in the sampling frame. Participation in the survey is compulsory.

A household comprises one person or a group of persons with or without a family relationship who live in the same house or in the same part of the house, who meet their common requirements together and take part in the tasks and management of the household.

Sampling plan

The current sampling design was completed in 2010. According to the sub sample pattern, the new sub samples come from the new sample design. The sampling frame currently is the National Address Database (from October 2008) which is based on the 2007 Address Based Population Registry System. The sampling design is a two stage stratified cluster sampling.

The design of the survey is based on 2-(2)-2 rotation pattern. As a result of the design, the estimations are produced quarterly for Turkey per urban-rural; annually for NUTS2 basis and at the same time NUTS1 per urban-rural basis.

The quarterly sample size is approximately 42 000 households, corresponding to a sample rate of about 0.24%.

In the first stage of sampling, the primary sampling unit is defined as blocks of addresses containing approximately 100 household addresses. PSU's are constructed in each settlement which has municipality. For the remaining settlements, i.e. villages, each village itself was defined as one PSU.

All PSUs are selected by probability proportional to size according to the number of addresses in each PSU.

The final sampling units are households. 15 household addresses are selected systematically from each PSU. All household members within a selected household are taken into the sample.

Weighting procedure

The results are weighted to the projected population, using a three-stage procedure.

In the first stage each sampling unit is assigned the design weights. In the second stage the initial weights are adjusted for non-response.

In the last stage the weights are calibrated to the projected population distributions, using a two-step raking ratio method. The calibration characteristics are NUTS 2 by the urban-rural distributions and sex by age group distributions.

Data collection

The data are collected each month using Computer Assisted Personal Interviewing (CAPI).

Since the year 2004, the first week of each month starting on Monday and ending on Sunday has been used as the reference period and the field application is completed within approximately 15 days.

In 2010, 47% of the interviews of persons aged 15-74 years were by proxy.

Overall response rate in 2010 was 87%. Refusals accounted for around 1.4% of the total non-response.

Major changes in recent years

2006: Delivery of micro-data to Eurostat.

2009:

- Changes to the questionnaire, including: an improved verification of ILO labour status of seasonal workers; the deletion of some variables deemed unsuitable for the country situation (ex; variables on atypical works); fine tunings on the wording of some questions, to better align to Commission Regulation No 1897/2000 and in particular to the twelve principles for the formulation of questions on labour status.
- Definition for resident population aligned to the Census 2011 recommendations, mainly regarding the treatment of students.
- From 2009Q1, results weighted using the new population projections. Back revisions were completed from 2005 onwards and quarterly micro data were re-sent to Eurostat.

Table 1: Coverage and response rate of the EU-LFS by country 2010

Country	Participation	Population interviewed for employment status	Population in institutional households	Response rate
BE	Compulsory	15+	No	72.1
BG	Voluntary	15+	Via the household (students)	82.0
CZ	Voluntary	15+	No	80.8
DK	Voluntary	15-74	Sampled	51.9
DE	Compulsory	15+	Yes	97.5
EE	Voluntary	15-74	Sampled	60.8
IE	Voluntary	15+	No	81.2
EL	Compulsory	15+	No	85.8
ES	Compulsory	16+	Via the household	83.7
FR	Compulsory	15+	Via the household	82.7
IT	Compulsory	16+	No	87.7
CY	Compulsory	15+	Via the household (conscripts)	96.6
LV	Voluntary	15-74	No	67.1
LT	Voluntary	15+	No	83.8
LU	Voluntary	15+	No	31.4
HU	Voluntary	15-74	No	84.1
MT	Compulsory	15+	No	75.4
NL	Voluntary	15+	No	79.4
AT	Compulsory	15+	No	92.6
PL	Voluntary	15+	No	72.9
PT	Compulsory	15+	Via the household (students / servicemen)	83.9
RO	Voluntary	15+	Via the household	94.3
SI	Voluntary	15+	No	79.7
SK	Compulsory	15+	Via the household	93.2
FI	Voluntary	15-74	Sampled	78.0
SE	Voluntary	15-74	Sampled	76.2
UK	Voluntary	16+	Population in NHS accommodation: sampled; students: via the household	58.7
IS	Voluntary	16-74	Sampled	82.6
NO	Compulsory	15-74	Sampled	85.0
CH	Compulsory	15+	No	82.9
HR	Voluntary	15+	No	77.5
MK	Voluntary	15-79	No	86.9
TR	Compulsory	15+	No	87.0

¹ Three-month moving average of unemployment is published every month.

Table 2: Sampling design and sample size of the EU-LFS by country 2010

Country	Basis of sampling frame	Primary sampling unit	Final sampling unit	Overall sampling rate (per quarter)	Achieved sample (average quarter 2010)	
					Households	Persons 15-74
BE	Population Register	Statistical sections	Households	0.33%	10,500	20,400
BG	Census 2001	Census enumeration districts	Households	0.65%	14,700	26,600
CZ	Register of Census Areas	Census areas	Dwellings	0.60%	25,100	45,800
DK	Population Register and other registers	-	Persons	0.90%	-	20,800
DE	Census 1987 for former BRD/ Central Population Register for former DDR / Register of new dwellings	-	Clusters (sampling districts) of dwellings Households and persons	0.25%	83,500	131,800
EE	Population registers	Persons	Households	0.70%	1,800	4,100
IE	Census 2006	Census blocks (of 75 dwellings)	Clusters of (15) households	3.00%	22,500	44,400
EL	Census 2001	Blocks	Dwellings	0.85%	31,300	57,400
ES	Census 2001 + Population registers	Geographical areas	Dwellings	0.40%	65,000	129,600
FR	Census 1999 + tax register	Geographical areas	Clusters of Dwellings units	0.25%	55,300	90,500
IT	Municipal registers	Municipalities	Households	0.33%	70,500	123,000
CY	Census 2001	Census enumeration areas / villages	Dwellings	1.40%	3,900	8,300
LV	Census 2000 + Population Register	Census enumeration areas	Households	0.68%	3,800	7,400
LT	Population register	-	Addresses of selected persons	0.67%	6,400	13,300
LU	Telephone numbers list	-	Households	3.00%	2,000	3,600
HU	Census 2001	Settlements	Dwellings	0.92%	28,600	55,400
MT	Census 2005	-	Households	2.25%	2,300	5,200
NL	List of postal addresses and population register	Municipalities → mailing addresses	Households	0.71%	36,000	74,700
AT	Register of Residents	-	Dwellings	0.63%	19,600	34,800
PL	Census, Register of housing units	Census clusters (towns) / enumeration districts (rural)	Dwellings	0.40%	36,600	80,300
PT	Census 2001	Geographical areas	Dwellings	0.60%	15,500	30,800
RO	Census 2002	Census sections	Clusters of (3) dwellings	0.39%	25,400	49,100
SI	Central Population register	-	Addresses	0.80%	5,700	13,000
SK	Census 2001	Census administrative units	Dwellings	0.60%	9,700	21,000
FI	Population register	-	Persons	0.90%	-	33,400
SE	Population register	-	Persons	1.25%	-	65,000
UK	Postal addresses / telephone numbers (N Scotl) / housing units (N Ire)	-	Postal addresses/telephone numbers/housing units	0.33%	46,200	79,600
IS	Population register	-	Persons	1.90%	-	3,100
NO	Population register	-	Households	0.70%	12,300	20,300
CH	Telephone directory/Register of foreigners	Household (main sample) / individuals (extra sample)	Persons	0.60%	-	28,400
HR	Census 2001	Census areas	Dwellings	0.39%	3,800	7,900
MK	Census 2002	Enumeration districts	Households	0.91%	4,000	11,300
TR	Enumeration Study (2000), National Address Database	Housing blocks	Dwellings	0.24%	36,000	91,800

Table 3: Stratification, rotation scheme and weighting in the EU-LFS by country 2010

Country	Variables used for the stratification	Rotation scheme	Variables of weighting
BE	Region	1-	Sex, age group, region
BG	Administrative districts, urban/rural	2-(2)-2	Sex, age group, administrative district, urban/rural
CZ	Region (districts, Prague 1 district)	5-	Sex, age group, district
DK	Registered unemployment	2-(2)-2	Sex, age group, socio-economic status, income, nationality, level of education, status in the unemployment register, region, if the dwelling place is recently changed
DE	Region and size of building	4-(annual)	Sex, age group, region, nationality (group), number of households
EE	Group of regions by population size	2-(2)-2	Sex, age group, region, urban/rural, national/non-national
IE	Region, urbanisation	5-	Sex, age group, region
EL	Region (NUTS3)	6-	Strata, sex, age group
ES	Population size of municipality, socio-economic characteristics of the population	6-	Sex, age group, region, nationals/non-nationals
FR	French region (NUTS2)*type of urban unit	6-	Size of urban entity, size & type of housing, number of new dwellings, sex, age group, region
IT	Size categories of municipalities within NUTS3 region	2-(2)-2	Sex, age group, region, nationality (group), number of households
CY	Districts, urban/rural	6-	Sex, age group
LV	Region, urban/rural	2-(2)-2	Sex, age group, region, urban/rural
LT	-	2-(2)-2	Sex, age group, urban/rural, region
LU	-	-	Sex, age group, size of households, national / non-national
HU	Administrative units, size categories of localities	6-	Sex, age group, region, number of households, population in major cities / rural
MT	-	2-(2)-2	District, sex, age group
NL	Region (Corop), employment-exchange regions	5-	Sex, age group, region, ethnic background, type of household, income and registration at unemployment office
AT	Bundesland	5-	Sex, age group, region, nationality (group), size of household
PL	Region, urban/rural, urbanisation	2-(2)-2	Sex, age group, urban/rural
PT	Region (NUTS3)	6-	Sex, age group, region
RO	Region, urban/rural	2-(2)-2	County, sex, age group, urban/rural
SI	Nuts3 regions, size and type of settlement (urban/rural)	3-(1)-2	Sex, age group, region
SK	NUTS 4	5-	Sex, age group, region
FI	Region	3-(1)-2	Sex, age group, region, registered unemployment
SE	Sex, age group, region	8-	Sex, age group, region, nation of birth, employment / unemployment
UK	By frame	5-	Sex, age group, region
IS	-	3-(2)-2	Sex, age group
NO	County (NUTS 3)	8-	Sex, age group, region, employment status
CH	Region/size of region (in pop.)	2-(2)-2	Sex, age group, region, marital status, nationality, residence permit
HR	Counties, city of Zagreb	2-(2)-2	Region
MK	Region, type of settlement (urban/rural) and size of the enumeration district	2-(2)-2	Sex, age group, region, number of households at regional level and number of households by size
TR	NUTS 2, urban/rural, density	2-(2)-2	Sex, age group, region, urban/rural

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