



GENERAL SECRETARIAT OF
THE NATIONAL STATISTICAL SERVICE
OF GREECE

GENERAL DIRECTORATE OF STATISTICAL SURVEYS
DIVISION OF POPULATION AND LABOR MARKET STATISTICS
HOUSEHOLD SURVEY UNIT

Community Survey on ICT usage in households and by individuals 2008

Quality report

Please read this first !!!

General guidelines on using this template

- In the title line of this page, please delete the non-applicable term (Metadata / Quality Report).
- Fill in the required information in the space (box) foreseen next to or below the item heading, if a box is irrelevant for your national survey, indicate "non-applicable" to avoid we have to come back to you on this item. An increase of the box size after inserting several lines or paragraphs is no problem. However, when reporting several pages for one item, we kindly ask you to give a short summary and refer to the full text in an annex.
- Keep the numbering of the chapters and items. Additional comments can be given at the end of the report.
- This template is designed to serve both the requirements for the Metadata as well as the Quality report. **Chapters 1 to 6 shall be completed for the metadata report (deadline for submission: before 31/05/2008), chapters 7 to 10 can be postponed until the Quality report (deadline for submission: not later than 05/11/2008).** However, where provisional information for the Quality Report topics is already available, we invite you to provide us with this data in the Metadata report (and update it in the Quality Report).
- Please submit the national questionnaire used (in national language and if available in English) annexed to the metadata report.
- Please replace in the header field the code 'EU' with your country code.
- **All information provided in this report on coverage of questions/items, net sample sizes, number of respondents, proportions, etc. should be in line with the transmitted data file(s).**

We kindly thank you for respecting these guidelines.

1. Cover information

1.1	Country	GREECE
1.2	Organisation responsible the survey <i>Please also indicate the organisation running the survey if different from the organisation responsible (e.g. because of sub-contracting).</i>	NATIONAL STATISTICAL SERVICE OF GREECE
1.3	Contact person(s) (name, unit, e-mail, phone, fax)	1. CHALKIADAKI MARIA UNIT OF HOUSEHOLD SURVEYS TEL. 0030 -210-485 2896 FAX. 0030 -210-485 2906 E-MAIL: MCHALK@STATISTICS.GR 2. ZOULIATIS IOANNIS UNIT OF HOUSEHOLD SURVEYS TEL. 0030 -210-485 2941 FAX. 0030 -210-485 2906 E-MAIL: ZOULIATI@STATISTICS.GR
1.4	Name of the collection The name of the survey in its original language(s) and in English (e.g. name used in the statistical office's English website).	SURVEY ON THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES FROM THE HOUSEHOLDS ΕΡΕΥΝΑ ΧΡΗΣΗΣ ΤΕΧΝΟΛΟΓΙΩΝ ΠΛΗΡΟΦΟΡΗΣΗΣ & ΕΠΙΚΟΙΝΩΝΙΑΣ ΑΠΟ ΤΑ ΝΟΙΚΟΚΥΡΙΑ
1.5	Last update of this report	20-10 -2008

2. General methodological information

2.1	<p>Reference period(s)</p> <p>The main reference period for the ICT variables as well as the background variables, e.g. <i>first quarter of the year</i> or <i>last three months before the interview</i> (with an indication of the respective months), or a specific date.</p> <ul style="list-style-type: none"> • <31st of March 2008 for educational level completed • Day of the survey conduction for activity status, employment situation, A1-A5, C4, D6, D8, D10, F12. • Three first months of 2008 for questions B2,B3,C2,C3,C5,C6,D1,D3,D4,D5,D9, • Last 12 months (April 2007-March 2008) for questions C6, D2,E2,E3,E4.
2.2	<p>Survey period</p> <p>The beginning and end date – if already known – of the data collection period.</p> <p>1 April 2008-31 May 2008</p>
2.3	<p>Survey vehicle</p> <p>Stand-alone or embedded in another survey. If embedded, give a short description of the survey the ICT modules are inserted in.</p> <p>ICT is a stand-alone survey</p>
2.4	<p>Survey type</p> <p>Short description of the survey type (face-to-face interview, self-administered mail survey, telephone interview, combination of techniques, other; etc.).</p> <p>Telephone interview</p>
2.5	<p>Survey participation</p> <p>Please indicate whether the survey is mandatory or voluntary.</p> <p>Participation is mandatory according to Greek law.</p>

2.6 Main methodological differences compared to previous survey(s)

If any, indicate the changes in methodology that may have an impact on the (comparability over time of the) results delivered to Eurostat, e.g. change in reference period, new reference sampling frame, different scope, different grossing-up method, different treatment of non-response, etc. No need for giving detailed technical analyses, a bulletpoint overview of the main differences and the expected impact is sufficient.

The sample of households for the ICT survey of the year **2008** was consisted of the samples used in the Greek Survey on Income and Living Conditions (EU-SILC of the years 2005, 2006 and 2007). The EU-SILC is an annual rotating household survey covering the target population of the ICT survey. The EU-SILC is a multistage stratified sampling survey with primary sampling unit the area (one or more unified blocks) and final unit the household. The samples design of the EU-SILC was based on data coming from the population census of the year 2001.

For the ICT primary units are the areas and secondary the households containing members belonging to the target population. The final unit is one person randomly selected among the household members of age sixteen to seventy four years.

The sampling design involves two levels of area stratification: (i) the first level is geographical stratification based on the partition of the total country area into thirteen standard administrative regions corresponding to the European NUTS II level. The two major city agglomerations of Greater Athens and Greater Thessalonica constitute separate major geographical strata. (ii) The second level of stratification involves grouping municipalities and communes within each NUTS II administrative region by degree of urbanization, i.e., according to their population size, into four categories. These categories are defined by the population size intervals 0-999, 1000-4999, 5000-29999, 30000 and over. The number of final strata in the thirteen regions was 50. The two major city agglomerations were further partitioned into 31 and 9 substrata (administrative subsections), respectively, on the basis of the city blocks of the municipalities that constitute them. Thus, the total number of strata for this survey was 90.

The sampling fraction in each of the 90 strata was equal to $f = \frac{n}{N} \cong 1,7 \text{ ‰}$, where $n=6.200$ is the total sample size of households and $N=3.701.086$ is the total number of households belonging to the target population, for the 2nd quarter of the year 2007.

The number of the sampling households n_h in each of the 90 strata (let h) were defined applying the proportional allocation as follows:

$$n_h = n \cdot \frac{N_h}{N},$$

where: N_h is the population size of the stratum h

The values of N and N_h were estimated from data coming from the Labour Force Survey with reference period the 2nd quarter of the year 2007.

3. Statistical unit(s), scope and target population

3.1 Statistical unit	Please indicate whether the statistical unit follows recommendations by ticking <i>Yes</i> or <i>No</i> (and specify the deviations, if any):		
		Yes	No (please specify the deviations)
Module A in the Eurostat model questionnaire: households with at least one member aged 16 to 74		X	
Modules B to E in the Eurostat model questionnaire: individuals aged 16 to 74		X	

3.2 Age groups covered	Please indicate the age scope (in the <i>Yes</i> column), or tick <i>No</i> if not applicable		
		Yes (please specify, e.g. 12-15 or 75-...)	No
Individuals younger than 16 ?		X ages 12-15	
Individuals aged 16 to 74 ?		X (compulsory)	
Individuals older than 74 ?			X

3.3 Territorial coverage	If applicable, indicate the parts of the country that are not included as well as an estimate of the resulting percentage of undercoverage (non-covered population compared to total country population).		
	All private households of the country and the members of them are covered in the survey, independently of their size or any socio-economic characteristics they may have.		
	Excluded are collective households such as hotels, hospitals, military camps, nursing homes, etc. As collective households were also considered households with more than 5 lodgers. Households having as members foreigners in diplomatic missions.		

	Universe	Households	Individuals
3.4 Target population	The number of <i>households</i> and <i>individuals</i> in the target population (scope, universe). Please restrict the numbers to the <i>Eurostat scope</i> (if additional age groups are covered in the national survey, these can be reported separately between brackets). If not directly available, please provide an estimate (e.g. based on other social surveys). If not applicable, please indicate why.		
		3.701.084	8.236.395
3.5 Non-target population	The approximate number of <i>households</i> and <i>individuals</i> outside the general scope of the survey (e.g. <i>individuals younger than 16 or older than 74; households with all members over 74 years old</i>), i.e. the difference between the total population (in terms of households or individuals) in the country and the target population. If not applicable, please indicate why.		
		408.944	2.047.725

4. Questionnaire

4.1	Adoption of <i>MANDATORY</i> questions and items from the Eurostat model questionnaire (2008, v3.1) <p>The questions listed below and its items reflect the required coverage of subjects and characteristics of Annex 2 of the Commission Regulation (EC) No 847/2007 of 18 July 2007. Please indicate in the table possible comments on the question/item coverage in your national questionnaire, e.g. insertion of additional items, different reporting periods, deviations in the routing of ordering of the questions and/or items (see also §4.4), differences in definitions or classifications, alternative sources used (esp. in the background characteristics).</p> <p>Where applicable, please report on the coverage of the questions for age groups beyond the standard scope, i.e. for respondents younger than 16 or for respondents older than 74. Possible comments on this issue can be added to the general column on deviations.</p>			
	Question	Any deviations from question / items in Model Questionnaire	Covered for other age groups?	
			<16	>74
	Module A : Access to selected ICTs		→ if not applicable, please leave blank	
A1	Does the household via one of its members has access to a computer at home?	X	X ¹	
A2	Does any member of this household have access to the Internet at home?	X	X ¹	
A3	On which of these devices is the Internet accessed at home?	X	X ¹	
A4	What types of Internet connection are used?	X	X ¹	
A5	What are the main reasons for not having access to the Internet at home?	X	X ¹	
	Module B : Use of computer		→ if not applicable, please leave blank	
B1	When did you most recently use a computer?	X	X	
B2	How often on average have you used a computer in the last 3 months?	X	X	
B3	Where have you used a computer in the last 3 months?	X	X	
	Module C : Use of the Internet		→ if not applicable, please leave blank	
C1	When did you last use the Internet?	X	X	
C2	On average how often did you use the Internet in the last 3 months?	X	X	
C3	Where have you used the Internet in the last 3 months?	X	X	
C4	Do you use any of the following mobile devices to access the Internet?	X		
C5	For which of the following activities did you use the Internet in the last 3 months for private use? [12 items and 1 subitem]	X ²		
C6	For which of the following activities relating to interaction with public services or administrations and during which period did you use the Internet for private purpose?	X		

¹ Household information available from the questionnaire for persons aged 16-74.

² 11 items (item i on selling of goods or services, e.g. via auctions not included as optional) and 1 sub-item.

	Question	Any deviations from question / items in Model Questionnaire	Covered for other age groups?	
			<16	>74
	Module D : Advanced Services		→ if not applicable, please leave blank	
D1	Did you use the Internet in the past 3 months for private purposes for the following communication activities ?	X	X	
D2	Did you replace with your Internet calls the following other means of communication ?	X		
D3	Did you use the Internet in the last 3 months for the following leisure activities related to obtaining and sharing audiovisual content ?	X	X	
D4	On average how often did you download music and/or films in the last 3 months ?	X	X	
D5	Did you pay in the last 3 months for online audiovisual content ?	X		
D6	What would make you pay for online audiovisual content ?	X		
D7	Did the use of the Internet replace your time spent with off-line media or other off-line activities ?	X		
D8	Do you use a mobile phone?	X	X	
D9	For which of the following activities did you use a mobile phone for private purposes in the last 3 months (other than involving voice calls or SMS)?	X	X	
D10	Do you use pre-payment or post-payment for your mobile phone ?	X		
	Module E : Use of e-Commerce		→ if not applicable, please leave blank	
E1	When did you most recently order goods or services for private use over the Internet (excluding manually typed e-mails) ?	X		
E2	What types of goods and services did you order over the Internet for private use in the last 12 months ?	X		
E3	Were any of the following products that you ordered over the Internet downloaded or accessed from websites rather than delivered by post etc.?	X		
E4	From whom did you buy or order goods or services for private purpose over the Internet in the last 12 months ?	X		
	Socio-demographic background variables		→ if not applicable, please leave blank	
F1	Age	X	X	
F2	Sex	X	X	
F3	Educational level (according to ISCED)	X	X	
F4	Employment situation	X	X	
F5	Occupation (according to ISCO)	X		

	Question	Any deviations from question / items in Model Questionnaire	Covered for other age groups?	
			<16	>74
F6	Region of Residence, NUTS 1	X	X	
F8	Geographical location (former y/n Objective 1 : from 2007 corresponding to « Convergence region « and all others, i.e. « Regional Competiveness and Employment region «)	X	X	
F9	Type of locality (degree of urbanisation)	X	X	
F10	Number of members in the household	X	X	
F11	of which, number of children under 16	X	X	
F12	Household income	X	X ¹	

4.2 Adoption of **OPTIONAL** questions and items from the Eurostat model questionnaire (2008, v3.1)

Please indicate in the table below if and which optional variables and questions were included in the national questionnaire.

For each question or item, an "x" in the column named Question included means that it was included in the national questionnaire. Where applicable, please report also on the coverage of the questions for age groups beyond the standard scope, i.e. for respondents younger than 16 or for respondents older than 74.

	Question / Item	Question included ?	Any deviations from question / items in Model Questionnaire	Covered for other age groups?	
				<16	>74
A3c1	Via Internet enabled mobile phone (GPRS, UMTS, etc.)	X		X ¹	
A3c2	Via handheld computer (palmtop, PDA)	X		X ¹	
B4	When did you last take a training course (of at least 3 hours) on any aspect of computer use ?	X			
C3e1	Public library	X		X	
C3e2	Post office	X		X	
C3e3	Public office, town hall, government agency	X		X	
C3e4	Community or voluntary organisation	X		X	
C3e5	Internet café	X		X	
C3e6	Hotspot	X		X	
C5i	Selling of goods or services, e.g. via auctions				
D10b1	Do you pay a flat rate for Internet access via your mobile phone ?	X			
F7	Region of Residence, NUTS 2				

¹ Household information available from the questionnaire for persons aged 16-74.

4.3	Additional questions introduced in the national questionnaire, if any
	<p>Additional questions have been introduced only in the questionnaire for children aged 12-15 years old. More specifically:</p> <p>D11. Time spent daily talking over the mobile phone (1-5 minutes, 6-10 min, 11-15 min, 16-20 min, more than 20 min, don't use my mobile phone every day)</p> <p>D12. Number of messages (SMSs/MMSs) daily sent (1-3 messages, 4-10 messages, more than 10 messages, don't send messages every day).</p>
4.4	Effects of deviations from the routing used in the Eurostat model questionnaire, if any

5. Sampling frame

5.1	Name and short description of the sampling frame or register used
	<p>The sampling frame (areas, households, individuals), which contains the units belonging to the target population, is based on the data from the EU-SILC survey of the period 2005-2007.</p>
5.2	Known shortcomings of the sampling frame, if any
	<p>Shortcomings in terms of timeliness (e.g. time lag between last update of the sampling frame and the moment of the actual sampling), geographical coverage, coverage of different subpopulations, etc.</p> <p>The sampling frame contains only the households that participated in the EU-SILC survey of the period 2005-2007. This means that only these households have probability to be selected and participate in the survey.</p>

6. Sampling design

6.1 Sampling method

Please give a description of the sampling method used (e.g. stratified random sample, quota sampling, cluster sampling; one-stage or two-stage sampling; if not directly selected from the register, how are individuals selected within the household; one or all individuals within a household; etc.) and the method used for determining the sample size and sample selection. If stratification was used, please specify which variables were used to stratify, the categories of those variables and the final number of strata.

The sample of households for the ICT survey of the year 2008 consisted of the samples used in the Greek Survey on Income and Living Conditions (EU-SILC of the years 2005, 2006 and 2007). The EU-SILC is an annual rotating household survey covering the target population of the ICT survey. The EU-SILC is a multistage stratified sampling survey with primary sampling unit the area (one or more unified blocks) and final unit the household. The samples design of the EU-SILC was based on data coming from the population census of the year 2001.

For the ICT primary units are the areas and secondary the households containing members belonging to the target population. The final unit is one person randomly selected among the household members of age sixteen to seventy four years.

The sampling design involves two levels of area stratification: (i) the first level is geographical stratification based on the partition of the total country area into thirteen standard administrative regions corresponding to the European NUTS II level. The two major city agglomerations of Greater Athens and Greater Thessalonica constitute separate major geographical strata. (ii) The second level of stratification involves grouping municipalities and communes within each NUTS II administrative region by degree of urbanization, i.e., according to their population size, into four categories. These categories are defined by the population size intervals 0-999, 1000-4999, 5000-29999, 30000 and over. The number of final strata in the thirteen regions was 50. The two major city agglomerations were further partitioned into 31 and 9 substrata (administrative subsections), respectively, on the basis of the city blocks of the municipalities that constitute them. Thus, the total number of strata for this survey was 90.

The sampling fraction in each of the 90 strata was equal to $f = \frac{n}{N} \cong 1,7 \text{ ‰}$, where $n=6.200$ is the total sample size of households and $N=3.837.189$ is the total number of households belonging to the target population. The N has been estimated from the Labour Force Survey of the 2nd quarter of 2007.

The number of the sampling households n_h in each of the 90 strata (let h) was defined applying the proportional allocation as follows:

$$n_h = n \cdot \frac{N_h}{N},$$

where N_h is the population size of the stratum h

The values of N and N_h were estimated from data coming from the Labour Force Survey with reference period the 2nd quarter of the year 2007.

Stages of probability sampling

The sample of households for the ICT survey of the year 2008 was selected of the sample used in the Greek Survey of Income and Living Conditions (EU-SILC of the years 2005, 2006 and 2007). Although the sample of households for the ICT survey of the year 2008 was selected of the sample used in the Greek Survey of Income and Living Conditions, however the following measures were taken for improving the selection probabilities, so that the demands of the ICT survey to be met. The definition of selection probabilities was as follows:

1st stage sampling

In this stage, from any ultimate stratum (crossing of NUTS II with the degree of urbanization), say stratum h , a_h primary units were drawn (where the number a_h of draws is approximately proportional to the population size N_h of the stratum number of households belonging to target population in the Labour Force Survey of the 2nd quarter of the year 2007).

The primary unit of order i in stratum h has probability of being drawn proportional to the population size as follows: $P_{hi} = \frac{N_{hi}}{N_h}$ (1)

where N_{hi} is the updated (from EU-SILC survey) target population of households in the hi primary unit.

2nd stage sampling

In the hi primary unit, out of N_{hi} households, a sample of n_{hi} households were selected with equal probabilities. Each of n_{hi} households has the same chance to be selected, equal to: $\frac{n_{hi}}{N_{hi}}$ (2).

The total number of households to be interviewed of the a_h sampling primary units were

$$n_h = \sum_{i=1}^{a_h} n_{hi}$$

Within primary sampling unit the calculation of sampling interval $\delta_{hi} = \frac{N_{hi}}{n_{hi}}$ was carried out, so that the following two desired conditions to be satisfied.

The expectation of the fraction $\frac{n_h}{N_h}$ should be the predetermined over sampling fraction

$$\frac{1}{\lambda} \cong 1,7\text{‰} \text{ in each stratum: } E\left(\frac{n_h}{N_h}\right) = \frac{1}{\lambda} \quad (3)$$

The sampling fraction $f = \frac{1}{\lambda} = \frac{n}{N} \cong 1,7 \text{ ‰}$, where $n=6.200$ is the total sample size of households and $N=3.701.086$ is the total number of households belonging to the target population.

The estimator of the stratum total Y_h (for any characteristic) should be self-weighting. In other words, the estimation should be derived as product of the sum of the values of the characteristic over the n_h sample households by the overall raising factor λ , which is equal in each stratum

The conditions (a) and (b) are satisfied when:

$$\frac{1}{a_h} \cdot \frac{1}{P_{hi}} \cdot \frac{N_{hi}}{n_{hi}} = \lambda \quad (4) \Rightarrow$$

$$\frac{1}{a_h} \cdot \frac{1}{P_{hi}} \cdot \delta_{hi} = \lambda \Rightarrow$$

$$\delta_{hi} = \frac{N_{hi}}{n_{hi}} = \lambda \cdot a_h \cdot P_{hi} \quad (5)$$

From the relations (1) and (5) \Rightarrow

$$\frac{N_{hi}}{n_{hi}} = \lambda \cdot a_h \cdot \frac{N_{hi}}{N_h} \Rightarrow$$

$$n_{hi} = \frac{N_{hi} \cdot N_h}{\lambda \cdot a_h \cdot N_{hi}} \Rightarrow$$

$$n_{hi} = \frac{N_h}{\lambda \cdot a_h} \quad (6)$$

From the relation (3): $\frac{1}{\lambda} = \frac{n_h}{N_h} \Rightarrow \lambda = \frac{N_h}{n_h} \quad (7)$

From the relations (6) and (7) $\Rightarrow n_{hi} = \frac{n_h}{a_h} \quad (8)$

3rd stage of sampling

In this stage from each household one individual (member of household belonging to the target population) was selected with equal probabilities.

Let be p_{hij} the selection probability of the hij individual, which belongs to the hi household. As one individual was elected with equal probabilities out of m_{hi} members belonging to target population, the p_{hij} is defined as: $p_{hij} = \frac{1}{m_{hi}}$

6.2 Additional measures taken at the time of sampling design to improve representativeness

If any, and if not covered under §6.1. E.g. corrections for sampling frame undercoverage, etc.

The initial probabilities of selection of the sampling households of EU-SILC were based on the population sizes (from the Greek General Population Census of the year 2001), which differ considerably from the new population sizes that better suit the demands of the current ICT survey. Additionally, the target populations of EU-SILC and ICT do not coincide. The measures of EU-SILC were based on all persons, but the current sample for ICT was restricted to the households with individuals aged 16 to 74 years old. Thus, although the sample of households for the ICT survey of the year 2008 was selected of the sample used in the Greek Survey of Income and Living Conditions (EU-SILC of the years 2005,2006 and 2007), the following measures were taken for improving the representativeness:

- The 1st stage probabilities of selection of primary units were modified taking into consideration the updated target population size in each stratum using estimated data from Labour Force Survey with reference period the 2nd quarter of the year 2007
- The 2nd stage probabilities of selection of households were modified taking into consideration the updated register of households in the primary sampling units.
- The allocation of sampling households in each separate stratum was carried out proportionally to the target population size, which was estimated from data coming from Labour Force Survey with reference period the 2nd quarter of the year 2007.

After the application of the above measures, the sampling households for the ICT have no the same probability of selections (1st and 2nd) with the sampling households for EU-SILC, after changing the selection probabilities of the EU-SILC households so that the probabilities of ICT households, to be determined on the updated target population.

Sample size		Households	Individuals (aged 16 to 74)	Individuals (younger than 16)	Individuals (older than 74)
6.3	Gross sample size The number of households/individuals initially selected from the sampling frame (if not applicable, please indicate why). Please restrict the numbers in the first two columns to the <i>Eurostat scope</i> (if additional age groups are covered, these can be reported separately in the last two columns).	6.501	6.501	→ if not applicable, please leave blank	
				400	
6.4	Net sample size The number of households/individuals that can be used in the final database (if not applicable, please indicate why).	To be filled in under §7.C (final report)			

7. Response and non-response

(quality report)

Note: This chapter only deals with non-response error. Other non-sampling error such as frame errors, measurement and processing errors or model assumption errors are discussed elsewhere or outside the scope of this methodological report.

UNIT NON-RESPONSE

Unit non-response occurs when not all elements (households and/or individuals) of the gross sample (i.e. the initial sample drawn from the reference sampling frame) participate in the survey and are thus not included in the net sample.

However, not all types of non-response are taken into account when calculating the response rate (in §7.D) as they can be rather related to the quality of e.g. the sampling frame than to the quality of the survey data.

Note: In this report - for reasons of comparability across countries - all non-contacts are considered to be non-response of eligible cases (where in reality some of the non-contacts may concern ineligible cases).

If additional age groups were covered, please report separately for individuals in the general scope (16-74), and any additional age groups covered (see the last two columns).

If no additional age groups were covered (see also §3.2 and §4.1), the last two columns can be left blank.

		Number of households	Number of individuals (aged 16-74)	Number of individuals (<16)	Number of individuals (>74)
7.A	Gross sample size The number of households/individuals initially selected from the sampling frame (if not applicable, please indicate why).	6.501	6.501	→ if not applicable, please leave blank 400	

	Type of unit non-response (ineligible cases)	Number of households	Number of individuals (aged 16-74)	Number of individuals (<16)	Number of individuals (>74)
7.1	Ineligible: out-of-scope E.g. selected household is not in the target population because all members are over 75 years old.	17	17	→ if not applicable, please leave blank -	
7.2	Other ineligible E.g. no dwelling exists at the selected address or selected individual has died between the reference data of the sampling frame (cf. §5.2) and the moment of the interview.	-	-	-	

7.B	Number of eligible elements I.e. the gross sample size corrected for the ineligible cases. ► $[\$7.B] = [\$7.A] - [\$7.1] - [\$7.2]$	6.484	6.484	400	
------------	---	--------------	--------------	------------	--

	Type of unit non-response (eligible cases)	Number of households	Number of individuals (aged 16-74)	Number of individuals (<16)	Number of individuals (>74)
7.3	Non-contact E.g. no one was home or postal survey was never sent back.	1.065	1.065	→ if not applicable, please leave blank 82	
7.4	Refusal E.g. selected household or individual was contacted but refused to take part in the survey.	374	374	29	

7.5	Inability to respond E.g. selected household or individual was unable to participate due to language barriers or cognitive or physical incapacity to respond.	-	-	-	
7.6	Rejected interviews E.g. the selected household/individual did take part but the survey form cannot be used (poor quality - e.g. strong inconsistencies; unacceptable item-response - e.g. individual left most of the questions unanswered; survey form got lost and interview cannot be repeated; etc.).	-	-	-	
7.7	Other non-response Please specify the other types of non-response encountered. <u>Note</u> : please add the other non-response related to ineligibility of the selected elements under §7.2. <ul style="list-style-type: none">......	-	-	-	

7.C	Net sample size The number of households/individuals that can be used in the final database (if not applicable, please indicate why). This notion corresponds to the <i>final sample</i> in the Tabulation Scheme. ► $[\$7.C] = [\$7.B] - [\$7.3] - [\$7.4] - [\$7.5] - [\$7.6] - [\$7.7]$	5.045	5.045	289	
------------	---	--------------	--------------	------------	--

		Households	Individuals (aged 16-74)	Individuals (<16)	Individuals (>74)
7.D	Unit response rate The unit response rate is the ratio of the <i>number of in-scope respondents</i> (= the number of achieved interviews or the net sample size, see §7.C) to the <i>number of eligible elements</i> selected from the sampling frame (see §7.B). The number of eligible elements equals the <i>gross sample size</i> (see §7.A) <i>minus the ineligible cases</i> (see §7.1 and §7.2). ► $[\$7.D] = [\$7.C] / [\$7.B]$	77,81	77,81	→ if not applicable, please leave blank	
				72,25	

7.8	Comments on the unit response rate, if any

7.9	Methods used for minimizing unit non-response Where applicable, give a description of measures taken to reduce the unit non-response: <ul style="list-style-type: none">advance notification in the form of a letter or phone call;system of reminders, number of visits, number of attempts for phone calls, etc.showing respondents how the data they are providing are being used;etc.
	An advance notification letter was sent to all households, one month before the survey conduction, among others providing information on how the data collected are being used. In cases where the households couldn't be approached, mainly due to temporary absence, a number of attempts for phone calls (up to three) were used.

7.10	<p>Methods used for dealing with unit non-response</p> <p>Indicate whether imputations are made for unit non-response and give a short description of the methods used (e.g. correction factor in the weighting procedure, imputation based on background characteristics known from the sampling frame, etc.).</p> <p>The method used is re-weighting according to which in each stratum, the extrapolation factor takes into account not only the selection probability but also the inverse of response rate.</p>
7.11	<p>Proxy answers</p> <p>Please indicate whether the instructions to interviewers allow for proxy interviews (another person in the household than the one who was randomly selected can answer the questions).</p> <p>If yes, give an estimate of the percentage of proxy interviews (compared to the total number of interviews).</p> <p>'non-applicable'</p>

ITEM NON-RESPONSE

Item non-response occurs when a respondent provides some, but not all, of the requested information, or if the reported information is not useable (note that entirely non-useable questionnaire are already counted in the *unit* non-response, see §7.6).

It may occur for a variety of reasons. Items may be missing because the respondent broke off the interview after partially completing it (but enough data were provided so that the questionnaire is not classified as a unit non-response). Items may be missing because the respondent inadvertently skipped an item, a module or a page (especially in self-administered mail surveys). Or a respondent may simply not have the information on the question (and no don't know option is foreseen) or refuse to give the requested information.

As item non-response usually goes hand-in-hand with systematic bias (e.g. the proportion of *No* answers may be higher among people with item non-response compared to those who did answer on a specific item), it is useful to assess the degree and impact of this type of non-response.

7.12	<p>Questions or items with item response rates below 90%</p> <p>If any, identify the items with low response rates (the cut-off value to be used is 0.90) and indicate their respective response rates. The item non-response rate should of course be calculated taking into account the routing and filtering in the questionnaire.</p>
7.13	<p>Methods used for dealing with item non-response</p> <p>Indicate whether imputations are made for item non-response and give a short description of the methods used (e.g. nearest-neighbour imputation, hot deck imputation, mode imputations within classes, etc.).</p> <p>The data entry program didn't allow for missing items.</p>
7.14	<p>Other comments relating to the item non-response</p> <p>If any, please use this box to inform on additional issues on the non-response calculation (e.g. method used in national publications, etc.).</p> <p>'non-applicable'</p>

8. Grossing-up procedures

(quality report)

Please give a description of the extrapolation or weighting procedures used to gross up the *households* (§8.1) and the *individuals* (§8.2) in the net sample to the (target) population, discussing the different steps taken or factors applied to the design weighting to take into account the (post)stratification, balancing for unit non-response, etc. In case similar methods are used for grossing-up the net samples of households and individuals, the discussion can be integrated under one heading.

8.1	Grossing-up procedures for households
	<p>Grossing-up procedures for households</p> <p>Let h be one of the final strata of households (Final stratum = Geography x Urbanization), then this will take the following values: $h = 1, 2, \dots, H$ (where $H = 90$). In each of the final strata (let h), if statistical information was selected from a sample of n'_h households, the extrapolation factor of the household of order i was defined as:</p> $w_{hi} = \frac{N_h}{n_h} \cdot \frac{1}{r_h} t_{hi} \quad (8.1)$ <p>where:</p> <p>N_h : The target population size in the h stratum according to LFS of the 2nd quarter 2007</p> <p>n_h : The initial sample size in the h stratum</p> <p>$\frac{N_h}{n_h}$: The initial probability of selection of the sampling households in the the h stratum, as the the estimator of the stratum total Y_h (for any characteristic) is self-weighting,</p> <p>$r_h = \frac{n'_h}{n_h}$ is the response rate in the h stratum</p> <p>t_{hi} : Factor, which adjusts the sample weights of households so that the sample totals conform to the population totals on a cell-by-cell basis (Population Weighting Adjustment). The auxiliary variable used at household level is the household size (1,2,3,4 or 5+ members) for the definition of cells or classes.</p> <p>The distribution of households by size class is estimated from Labour Force Data, with reference period the 2nd quarter of 2008</p>

8.2 Grossing-up procedures for individuals

In each of the final strata of households (let h), if statistical information was selected from a sample of m_h individuals, the extrapolation factor of the individual of order j belonging to the hi household is defined as follows:

$$w_{hij} = w_{hi} \cdot \frac{1}{p_{hij}} \cdot g_{hij} \quad (8.2)$$

where:

w_{hi} : The extrapolation factor of the hi household in which the hij individual belongs

p_{hij} : The selection probability of the hij individual, which belongs to the hi household. As one individual was selected with equal probabilities out of m_{hi} members belonging to the target population, the p_{hij} is defined as: $p_{hij} = \frac{1}{m_{hi}}$

g_{hij} Factor, which adjusts the sample weights of individuals, so that the sample distribution conform to the population distribution across a set of classes. The classes are 24, which are defined by crossing sex by age groups (2 sex categories \times 12 age groups). The age groups are defined by the year intervals: 16-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69 and 70-74. The population distribution of individuals by sex and age groups is estimated from data coming from Labour Force Survey with reference period the 2nd quarter of 2008.

9. Sampling error (quality report)

Standard error (for a selection of indicators)

The sampling error reflects the fact that only a particular sample was surveyed rather than the entire population. It is estimated by the standard error and can be expressed by the square root of the estimate of the sampling variance ($\hat{\sigma}_{(\hat{\theta})}$). The estimation of the sampling variance should ideally take into account the sampling design (e.g. the stratification).

In case the standard errors are derived using the variance formula for simple random sampling and incorporating a factor which reflects the multi-stage, clustered nature of the sampling design, please comment on the assumptions made and/or the methods used (§9.6).

Please indicate below the number of respondents (absolute value for Yes answers), the estimated value of the proportion (in %) as well as the respective *standard error (in %)* for the indicators and subindicators mentioned.

Please note that the accuracy measure used, i.e. the STANDARD DEVIATION, was also addressed in the 2006 and 2007 report templates but differs from the 2004 and 2005 report templates (where the coefficient of variation was used).

The section 9.7 should be completed with comments on reliability and representativeness of results and completeness of dataset. The two questions should be left blank if not applicable, i.e. if standard errors found were adequate or if subgroups of the population had always a sufficient number of respondents.

	Indicator or subindicator - on households and individuals in the general scope (16-74) and related subgroups -	<i>Number of respondents</i>	<i>Estimated proportion (%)</i>	<i>Standard error (%)</i>
9.1	Proportion of households having access to the Internet at home (item 'Yes' in variable A2 of the 2008 model questionnaire)	1.145.970	30,97	2,2
9.2	Proportion of households using a broadband connection (a 'Yes' on option b or c in variable A4 of the 2008 model questionnaire)	831.190	72,53	1,7
9.3	Proportion of individuals regularly using the Internet: overall (indiv. who ticked option 1 or 2 in variable C2 of the 2008 model questionnaire)	2.716.017	32,98	2,0
9.3.1	Proportion of ind. regularly using the Internet: males (as % of all men)	1.540.871	37,99	2,6
9.3.2	Proportion of ind. regularly using the Internet: females (as % of all women)	1.175.146	28,12	3,0
9.3.3	Proportion of ind. regularly using the Internet: age group 16-24 years (as % of all individuals aged 16-24 years)	792.317	71,38	3,2
9.3.4	Proportion of ind. regularly using the Internet: age group 25-34 years (as % of all individuals aged 25-34 years)	824.417	50,50	3,8
9.3.5	Proportion of ind. regularly using the Internet: age group 35-44 years (as % of all individuals aged 35-44 years)	610.663	37,48	4,1
9.3.6	Proportion of ind. regularly using the Internet: age group 45-54 years (as % of all individuals aged 45-54 years)	344.657	23,40	6,0
9.3.7	Proportion of ind. regularly using the Internet: age group 55-64 years (as % of all individuals aged 55-64 years)	131.916	10,79	9,3
9.3.8	Proportion of ind. regularly using the Internet: age group 65-74 years (as % of all individuals aged 65-74 years)	12.048	1,03	29,7
9.3.9	Proportion of ind. regularly using the Internet: low educational level (as % of all individuals with low education)	323.857	9,37	6,6
9.3.10	Proportion of ind. regularly using the Internet: medium educat. level (as % of all individuals with medium education)	1.251.947	41,49	3,1
9.3.11	Proportion of ind. regularly using the Internet: high educational level (as % of all individuals with high education)	1.140.214	64,74	2,3
9.3.12	Proportion of ind. regularly using the Internet: students (as % of all students)	568.431	81,57	3,1
9.3.13	Proportion of ind. regularly using the Internet: employees or self-employed (as % of all employees or self-employed)	1.860.643	43,32	2,4

9.3.14	Proportion of ind. regularly using the Internet: unemployed (as % of all unemployed)	106.616	28,12	12,4
9.3.15	Proportion of ind. regularly using the Internet: retired, other inactive (as % of all retired and other inactive)	180.327	6,3	9,3
9.4	Proportion of individuals having downloaded official forms in the last 3 months (individuals who ticked item b in variable C6 of the 2008 model questionnaire)	330.467	10,51	7,5
9.5	Proportion of individuals having ordered goods or services for private use over the internet in the last 3 months (individuals who ticked option 1 in variable E1 of the 2008 model questionnaire)	499.065	13,7	6,3

9.6 Calculation of the standard error

There exist different methods by which the standard error of an estimated proportion can be assessed based on the distribution in the sample. Please, describe below the approach which you have followed. This information will help Eurostat to evaluate the comparability of the standard errors supplied in the previous section by the different statistical institutes participating in the survey.

a) Name and brief description of the applied estimation approach

For the variance estimation of the survey characteristics, the individuals were post-stratified in post strata defined by age-group and sex (post stratum=age-group x sex). In each post stratum the $\sum_i w_{hi} = N_h$ is

approximately constant (known population from the second quarter 2008 of LFS) due to calibration process.

As a result,

$$V(\hat{Y}) = \sum_h V(\hat{Y}_h) = \sum_h \sum_i w_{hi} \cdot (w_{hi} - 1) \cdot (y_{hi} - \bar{y}_h)^2$$

where: h: post stratum

w_{hi} : The extrapolation factor of the hi household member,

y_{hi} : The value of the variable y for the person hi and

\bar{y}_h : The weighted mean of the post-stratum h . That is:

$$\bar{y}_h = \frac{\sum_i w_{hi} \cdot y_{hi}}{\sum_i w_{hi}}$$

For ratios $R = \frac{Y}{X} = \frac{\sum_h \sum_i y_{hi}}{\sum_h \sum_i x_{hi}}$, the variance of \hat{R} is given by the following formula:

$$V(\hat{R}) = \frac{V(\hat{Y}) + \hat{R}^2 \cdot V(\hat{X}) - 2 \cdot \hat{R} \cdot Cov(\hat{Y}, \hat{X})}{\hat{X}^2}$$

where:

$$\hat{R} = \frac{\hat{Y}}{\hat{X}},$$

\hat{Y}, \hat{X} : estimation of variables y and x

$$Cov(\hat{Y}, \hat{X}) = \sum_h Cov(\hat{Y}_h, \hat{X}_h) = \sum_h \sum_i w_{hi} \cdot (w_{hi} - 1) \cdot (y_{hi} - \bar{y}_h) \cdot (x_{hi} - \bar{x}_h)$$

x_{hi} : the value of variable x, for the person hi

\bar{x}_h : The weighted mean of the post-stratum h . That is:

$$\bar{x}_h = \frac{\sum_i w_{hi} \cdot x_{hi}}{\sum_i w_{hi}}$$

In case the denominator of a ratio is equal to an estimated number of household-members belonging to one

sub-population, then $x_{hi} = \begin{cases} 1 & \text{if } hi \in U_d \\ 0 & \text{otherwise} \end{cases}$

For the variance estimations of characteristics relating to households, that strata used are the initial 90 strata, determined by the geography and the rank of urbanization. In each stratum the $\sum_i w_{hi} = N_h$ = constant (known number of households from the 2nd quarter 2008 of LFS).

b) basic formula

$$\text{Standard error } ste(\hat{R}) = \sqrt{V(\hat{R})}$$

c) Main reference in the literature

Kish, L. (1965). Survey Sampling, John Wiley and Sons. New York

Cochran, W. G. (1977) Sampling Techniques, John Wiley and Sons. New York

d) How has the stratification been taken into account?

For the variance estimation of the survey characteristics, the households were post-stratified in 5 post strata defined by household' size determined by the number of household's members. While the individuals were post-stratified in post strata defined by 12 age-groups and sex (post stratum=age-group x sex).

e) Which strata have been considered?

The age groups are defined by the year intervals: 16-19, 20-24, 25-29,30-34, 35-39,40-44, 45-49, 50-54, 55-59,60-64, 65-69 and 70-74

The household's size groups are: 1,2,3,4,5+

9.7	Comments on reliability and representativeness of results and completeness of dataset			
	<p>These comments should reflect on the standard errors reported for the indicators and subgroups in 9.1 to 9.5 above as well as on the other indicators and breakdowns. The estimated standard error shall not exceed 2% for the overall proportions and shall not exceed 5% for the proportions relating to the different subgroups of the population where these subgroups constitute at least 10% of the total population in the scope of the survey. If problems were found, these could have implications for future surveys (e.g. need to improve sampling design or to increase sample sizes for households or individuals).</p>			
	Indicators and breakdowns in sections 9.1 to 9.5 above:			
	<p>According to the survey design, the estimated proportions that are greater or equal to 20% achieve a sampling error lower or equal to 2%</p> <p>In cases where the survey characteristic is rare (frequency <2%), the estimation is not robust (CV>10%). The 2% is equivalent to 165.000 persons in the target population. In the rest cases, the comparisons are feasible and the large differences may be attributed to the behaviour of the sampling individuals as well as to the high values of the sampling errors.</p>			
	Other indicators and breakdowns:			
FOR ALL INDICATORS AND BREAKDOWNS:		If applicable, please tick:		
If significant sampling errors were found, were data cells suppressed in the transmitted dataset and flagged as unreliable?	Yes		No	✓
If a low number of respondents were found for one or more groups of population (e.g. <10), were data cells suppressed in the transmitted dataset and flagged as unreliable?	Yes		No	✓

10. Microdata

10.1	Please indicate below "Yes" or "No" if microdata were/will be transmitted in addition to the aggregated data. If necessary, any comments related to microdata transmission may be added.
	Yes

11. Closing remarks

11.1	Problems encountered and lessons to be learnt These comments can relate to methodological issues as well as to the questionnaire itself (item construction, clarity of definitions to interviewers and respondents, routing and filtering, outcome of pre-tests, etc.)
11.2	Other comments, if any

12. Annexes

Note: Please also provide the annexes in a computer-readable format and in English

12.1	Questionnaires in national language Yes
12.2	Questionnaires in English (if available) Yes
12.3	Interviewer instructions (if available) Yes
12.4	National reports on methodology (if available)
12.5	Analysis of key results, backed up by tables and graphs (if available)
12.6	Other annexes Please give an overview of other annexes (whether or not referred to in the preceding chapters of this report)
	<ul style="list-style-type: none"> • ... • ...