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Directorate F: Social statistics  
Unit F-4: Quality of life

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## **2010 EU Comparative Final Quality Report**

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## 0. INTRODUCTION

Commission Regulation (EC) No 1177/2003 concerning Community statistics on income and living conditions (EU-SILC) in its Article 16 states the following:

*1. Member States shall produce by the end of the year N+1 an intermediate quality report relating to the common cross-sectional EU indicators based on the cross-sectional component of year N.*

*Member States shall produce by the end of year N+2 final quality reports that cover both cross-sectional and longitudinal components in relation to the year of the survey N, focusing on the internal accuracy. [...]*

*2. The Commission (Eurostat) shall produce by the end of June N+2 a comparative intermediate quality report relating to the common cross-sectional EU indicators of year N.*

*The Commission (Eurostat) shall produce by 30 June N+3 a comparative final quality report that covers both cross-sectional and longitudinal components in relation to the year of the survey N. [...]*

In 2010 the EU-SILC instrument covered 32 countries, that is, all EU Member States plus Iceland, Norway, Turkey, Switzerland and Croatia.

The objective of the document is to evaluate the quality of the instrument from a European point of view, by establishing between-country comparisons of some of its key quality dimensions.

The quality aspects described in this document are those specified in the Commission Regulation N° 28/2004 (Annex IV) as regards the detailed content of final quality reports to be produced by Eurostat.

## 1. RELEVANCE

The relevance of an instrument has to be assessed in the light of the needs of its users. As for EU-SILC the main users are the following:

- Institutional users like DG EMPL of the Commission and the Social Protection Committee, in charge of the monitoring of social protection and social inclusion, or other Commission services;
- Statistical users in Eurostat or in Member States National Statistical Institutes to feed sectorial or transversal publications;
- Researchers having access to microdata; and
- End users – including the media - interested in living conditions and social cohesion in the EU.

The EU-SILC instrument is the main source for comparable indicators for monitoring and reporting on living conditions and social cohesion at the EU level. It has been moreover

recognized by Heads of States and Governments as the data source for the Europe 2020 strategy headline target on poverty<sup>1</sup>.

## 2. ACCURACY

The concept of accuracy refers to the reliability of estimates computed from a sample rather than from the entire population. This section dwells on methodological features of the EU-SILC samples surveyed in each country and intends to draw a picture of their relevance for estimation purposes. Countries often use the same sampling design to draw both the cross sectional and longitudinal samples.

### 2.1. Sample design

Countries are used to draw their sample with the same sample design for both cross sectional and longitudinal component. The 2010 EU Comparative Intermediate quality report includes a detailed section and an annex on this issue therefore only a summary table is presented here.

**Table 1** Sampling design by country (2010)

Sampling unit	Sampling design	Country
<b>Dwellings/ Addresses</b>	Simple random sampling	MT
	Stratified simple random sampling	LU, AT
	Stratified random sampling from former participants of micro census	DE
	Stratified multi-stage sampling	CZ, ES, PL, PT, RO
	Stratified multi-stage systematic sampling	FR, LV, UK, HR
<b>Households</b>	Stratified random sampling	CY, SK, CH,LT
	Stratified and systematic sampling	EE
	Stratified multi-stage sampling	IE
	Stratified multi-stage systematic sampling	BE, BG, EL, IT
	Stratified sampling according to different design by rotational group	HU
<b>Individuals</b>	Simple random sampling	DK, IS*
	Systematic sampling	SE,NO
	Stratified two-phase sampling	FI
	Stratified two-stage systematic sampling	SI, NL

\* A post-stratification is applied during the weighting procedure

Source: National Intermediate and final Quality Reports 2010

The sampling unit can be the address, the dwelling, the household or the individual according to the design chosen by the country. In the case of a sample of dwellings or addresses, if more than one household share the same dwelling, dwellings must be regarded as clusters of households. All the households and all persons aged 16 and over living in each household are eligible for the survey. As showed by the table above, thirteen out of thirty-one countries selected a sample of dwellings or addresses. Additional eleven countries selected a sample of household for the EU-

<sup>1</sup> See EPSCO Council Conclusions, 7-8 June 2010 (Council document 10560/10)

SILC 2010 operation. Households are clusters of individuals and all the members aged 16 and over at the end of the income reference period of a selected household are eligible for inclusion in the sample. Countries that carry out a sampling of individuals, instead, only select persons of age 16 and over and the household is defined as the household of which the selected person is a member at the beginning of the survey. Nordic countries as well as the Netherlands and Slovenia select a sample of individuals.

## **2.2. Sampling errors**

This section was largely developed in the 2010 Comparative EU Intermediate Quality Report. In addition, annex 2 of the 2006 Comparative EU Final Quality report presents information on the concept of sampling errors, the technical methodology for their estimation and the obtained results for a subset of countries.

## **2.3. Non-sampling errors**

Commission Regulation (EC) No 28/2004 specifies the information on non-sampling errors which should be presented in national quality reports: sampling frame and coverage errors, measurement and processing error and non-response errors. All these sections were largely discussed in the 2010 Comparative EU Intermediate Quality Report. This section focuses on the unit non-response and more precisely on the achieved sample size for the EU-SILC longitudinal component.

### *2.3.1. Non-response errors*

Non-response means a failure to obtain a measurement on one or more study variables for one or more sample units. Non-response errors occur when the survey fails to get a response to some or all of the questions. Non-response causes both an increase in variance, due to the decrease in the effective sample size and/or due to the use of imputation and, more importantly, causes bias as the non-respondents and respondents generally differ with respect to the characteristic of interest.

Non-response is a potential source of bias particularly if the missing data mechanism is not what has been termed as ‘missing at random’. For instance, one might expect persons with high incomes to be more reluctant to give income information in an interview, thus rendering the upper income class under-represented in the sample and the estimates downwardly biased.

In particular, this section focuses on the analysis of the achieved sample size. The following tables present the achieved sample size for the longitudinal sample. For the household sample size (table 2), the household identification numbers are taken from the D-file (register file) with the corresponding year of interview. Starting with 2007 the different number of years is counted. The interviewed acceptance is also checked (DB135 should be equal to 1). When this number of years is equal to four, the household is added in the number of households which have been in the sample for four years. Similarly for 2008 the number of households that have been three years in the sample is counted; and idem for 2009.

The achieved sample size in terms of individuals is presented in table 3 and is based on the R-file. The different number of years when an individual is present in the file is counted, similarly as it has been done for the households for constructing table 2. Here the completeness of the information is checked through the variable RB250. Results are given for the total population as

well as for the population of 16+. Breakdown according to sample persons and co-residents are also presented in the table.

**Table 2** Achieved household sample size (longitudinal 2010 dataset)

Country	Legal Requirement*	2009-2010	2008-2009 2010	2007-2008 2009-2010
BE	3500	3886	2314	1183
BG	3500	4283	2336	776
CZ	3500	6413	3996	2264
DK	3250	3316	2064	970
DE	6000	8962	5556	2722
EE	2750	3402	2238	1087
IE	2750	2544	1221	472
EL	3500	5054	3013	1151
ES	5000	9376	5799	2715
FR	5500	8768	6859	5142
IT	5500	13318	8485	3987
CY	2500	2184	1429	725
LV	2750	4203	2558	1137
LT	3000	3677	2358	1234
LU	2500	3536	2697	2429
HU	3500	6705	3831	1871
MT	2250	2574	1491	700
NL	3750	6842	4411	2071
AT	3250	4124	2399	1119
PL	4500	9185	6011	2909
PT	3250	3603	2103	989
RO	4000	5733	3766	1900
SI	2750	6321	3759	1592
SK	3250	3738	2456	1170
FI	3000	4354	2826	1394
SE	3500	4493	2961	1556
UK	5750	5120	3157	1487
IS	1700	1745	1091	501
NO	2750	4012	3056	2433

\* Minimum effective sample size for a couple of consecutive years.

Source: Micro-database (May 2013)

As shown in table 2, at least three countries (Ireland, Cyprus and the United Kingdom<sup>2</sup>) do not achieve the required minimum sample size. Indeed, their sample size related to the 2-year panel is less than the legal requirement even without taking into account the design effect.

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<sup>2</sup> The UK has already taken steps to increase the sample size to meet the legal requirements. It is projected that the UK will meet the longitudinal effective sample size requirement for the 2010-13 dataset.

**Table 3** Achieved individual sample size (longitudinal 2010 dataset)

Country	2009-2010				2008-2009-2010				2007-2008-2009-2010			
	TOT	16 +	SEL. RESP.	CO-RES	TOT	16 +	SEL. RESP.	CO-RES	TOT	16 +	SEL. RESP.	CO-RES
BE	9145	7243	7248	1897	5331	4244	4307	1024	2721	2166	2241	480
BG	11449	9899	9982	1467	6258	5330	5447	811	2230	1821	1911	319
CZ	15134	12718	12928	2206	9450	7894	8113	1337	5289	4400	4564	725
DK	8026	6395	3316	4710	4945	3852	2064	2881	2320	1785	970	1350
DE	19066	16024	16191	2875	11581	9698	9953	1628	5728	4731	4897	831
EE	9308	7605	7666	1642	6094	4906	5103	991	2932	2334	2488	444
IE	6022	4634	4735	1287	2661	2123	2178	483	1031	818	853	178
EL	12803	10614	10937	1866	7562	6283	6511	1051	2832	2345	2450	382
ES	26163	21453	21662	4501	16006	13105	13501	2505	7496	6055	6334	1162
FR	21151	16464	20332	819	16515	12755	16030	485	12364	9467	12091	273
IT	33735	28276	28343	5392	21383	17880	18160	3223	10029	8396	8628	1401
CY	6456	5173	5270	1186	4212	3333	3448	764	2167	1690	1782	385
LV	10602	8595	8965	1637	6267	5082	5402	865	2705	2168	2335	370
LT	9411	8018	8222	1189	5884	4963	5190	694	3022	2529	2658	364
LU	9509	7041	9128	381	7057	5169	6781	276	6252	4621	6059	193
HU	16984	13938	14430	2554	9597	7820	8135	1462	4618	3706	3884	734
MT	7030	5833	5926	1104	4038	3317	3417	621	1902	1524	1582	320
NL	16645	12630	6842	9803	10511	7932	4411	6100	4971	3717	2071	2900
AT	9572	7583	7560	1798	5599	4367	4392	1092	2685	2029	2090	534
PL	26859	21692	22185	4674	17456	13971	14510	2946	8533	6723	7113	1420
PT	9378	7894	8080	1298	5383	4544	4689	694	2542	2113	2202	340
RO	13571	11857	11924	1647	8995	7763	7880	1114	4587	3906	3993	594
SI	20035	16691	6321	13714	11674	9755	3759	7915	4879	4045	1592	3287
SK	11520	9816	10037	1483	7420	6350	6541	879	3513	2991	3106	407
FI	10793	8303	4354	6439	6782	5160	2826	3956	3257	2484	1394	1863
SE	11029	8533	4543	6486	7080	5405	2993	4087	3653	2737	1571	2082
UK	11702	9240	9386	2316	7083	5583	5770	1313	3289	2584	2693	596
IS	5247	3667	1745	3502	3110	2170	1091	2019	1370	955	501	869
NO	10147	7432	4012	6135	7389	5420	3056	4333	5507	4071	2433	3074

Source: Micro-database (May 2013)

## 2.4. Mode of data collection

The EU-SILC Regulation allows some degree of flexibility to countries regarding the mode of data collection. The information can be either extracted from registers or collected from interviews. For the interview, four different ways to collect the data are possible:

- Paper-Assisted Personal Interview (PAPI)
- Computer-Assisted Personal Interview (CAPI)
- Computer-Assisted Telephone Interview (CATI)
- Self-administered questionnaire.

Countries may use only one method or a combination of various methods. In the EU-SILC legal basis, priority is given to face-to-face personal interviews (PAPI or CAPI) over the other modes of data collection. The following table shows the different modes of data collection used by all countries for each year of the 2010 longitudinal dataset, this means for the years 2007 to 2010, on

the basis of the people present in the 2010 longitudinal file<sup>3</sup>. Percentages by country for each mode of data collection as well as for proxy interviews for the 2007, 2008 2009 and 2010 longitudinal component can be found in annexes 2 and 3.

**Table 4** Mode of data collection (EU27<sup>4</sup> plus IS and NO; %) (Longitudinal 2010 dataset)

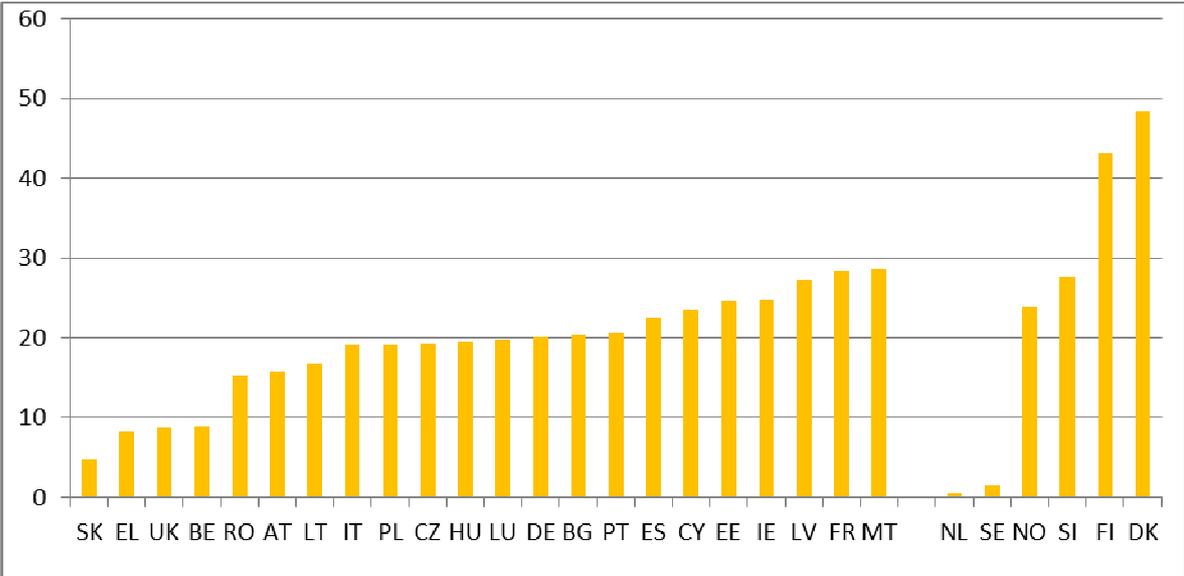
	Mode of data collection			
	PAPI	CAPI	CATI	Self-administered
2007	29.17	31.25	22.92	16.67
2008	28.85	30.77	26.92	13.46
2009	28.85	30.77	25.00	15.38
2010	29.41	31.37	25.49	13.73

Source: Micro-database (May 2013)

Face-to-face interviews remains the most used (either in paper or with a computer) mode of data collection on average over the years while the use of Self-administered questionnaires has decreased on average in 2010.

Proxy interviewing is permitted if the proxy rate is kept as limited as possible. Some countries that encountered rather high non-response rates chose to use proxies to ensure a certain degree of accuracy in their data. In addition, in countries that use the selected respondent type of survey, the household respondent (in most cases selected respondent) is asked for information about all household members, therefore, these countries have a high percentage of proxy interviews concerning personal interviews. The following graph presents the percentage of proxies in 2010 for the longitudinal component.

**Figure 1** Percentage of proxy interviews by country (longitudinal 2010dataset)



Source: Micro-database (May 2013)

<sup>3</sup> Figures are obtained adding up the number of interviews carried out by each mode of data collection by all countries and dividing it by the total of interviews carried out in all countries.

<sup>4</sup> Countries are included for the years when there is data for the longitudinal operation.

As we can see in the figure above, the percentage of proxy interviews varies greatly among countries. In addition, for some countries there are also large year-to-year changes as shown in Annex 3. In the register countries, the percentage of proxies varies from below 2% in Sweden to around 50% in Denmark.

## 2.5. Imputation procedure

According to EU-SILC Framework Regulation, “Member States shall transmit to the Commission (Eurostat) in the form of micro-data files weighted cross-sectional and longitudinal data which has been checked, edited and imputed in relation to the income”.

Countries should implement imputation procedure for their income variables but flexibility is given to them in order to let them choose the method which is the most appropriate in their case. Next table indicates the types of imputation techniques used by countries, as reported in the national quality reports or by bilateral email exchanges with Eurostat.

**Table 5:** Imputation techniques used by country

	Mean/median imputation	Regression model	Hot deck	Cold deck	Other methods
BE	Y	Y	Y	N	Y
BG	N	Y	N	N	Y
CZ	N	N	Y	N	N
DK	No imputation procedure was applied				
DE	Y	Y	N	N	Y
EE	Y	Y	Y	Y	Y
IE	N	N	Y	N	N
EL	No imputation procedure was applied				
ES	N	Y	N	N	N
FR	N	Y	Y	N	Y
IT	N	Y	Y	N	N
CY	N	N	N	Y	Y
LV	N	N	Y	N	N
LT	Y	Y	Y	Y	Y
LU	N	Y	Y	Y	N
HU	Y	Y	N	N	Y
MT	Y	Y	Y	N	Y
NL	Y	N	N	N	N
AT	Y	Y	Y	Y	Y
PL	N	Y	Y	N	Y
PT	N	Y	N	N	N
RO	N	N	Y	N	Y
SI	N	N	Y	Y	Y
SK	N	Y	N	N	N
FI	N	Y	Y	N	Y
SE	No imputation procedure was applied				
UK	N	N	Y	N	Y
IS	N	Y	N	N	Y
NO	N	N	N	N	Y

Source: National Final Quality Reports 2010

## 2.6. Imputed rent

The imputed rent (HY030) refers to the value that shall be imputed for all households that do not report paying full rent, either because they are owner-occupiers or they live in accommodation rented at a lower price than the market price or because the accommodation is provided rent free. This variable is mandatory from 2007 onwards.

About the method to use to estimate the imputed rent, Eurostat recommended, for the sake of comparability among countries, to apply a regression/stratification method except for duly justified cases, in particular when the private rental market represents less than 10% of the market or when regression method is statistically unreliable. In these cases, countries are invited to follow the user cost method.

The following table summarizes the information received from countries through their national quality reports 2010 and bilateral exchanges between them and Eurostat.

**Table 6:** Method used to estimate the imputed rent by country (2010 operation)

	<b>Method</b>
<b>BE</b>	Heckman regression model (correction of selection bias)
<b>BG</b>	Stratification method based on actual rents, with correction of selection bias
<b>CZ</b>	Subjective method
<b>DK</b>	Rental equivalence model
<b>DE</b>	Stratification method
<b>EE</b>	User cost method
<b>IE</b>	Stratification method
<b>EL</b>	Stratification method
<b>ES</b>	Stratification method
<b>FR</b>	Regression method
<b>IT</b>	Regression model with Heckman correction
<b>CY</b>	Heckman regression model, with correction of selection bias
<b>LV</b>	Regression method
<b>LT</b>	1 step: Stratification method; 2 step: Regression method
<b>LU</b>	Heckman regression model, with correction of selection bias
<b>HU</b>	Regression method
<b>MT</b>	Stratification method (using auxiliary information)
<b>NL</b>	Regression model
<b>AT</b>	Rental equivalence model with several regression models
<b>PL</b>	Regression method
<b>PT</b>	Regression method from 2008 (self-assessment method in 2007)
<b>RO</b>	Stratification method
<b>SI</b>	Stratification method
<b>SK</b>	User-cost method
<b>FI</b>	Stratification method
<b>SE</b>	User-cost method
<b>UK</b>	Hedonic regression modelling, incorporating Mill's correction (based on Heckman method)
<b>IS</b>	Market value of dwellings received from housing registers
<b>NO</b>	Stratification method

Source: National Final quality reports 2010 and bilateral exchanges between Eurostat and the countries

From Table 5 it can be concluded that in the 2010 EU-SILC operation Eurostat recommendations have been followed by nearly all countries. Out of the 27 EU Member States plus Iceland and Norway, 24 countries used in the 2010 operation the rental equivalence model (either regression, either stratification approach). BG used a stratification method based on actual rents and RO estimated the imputed rent from the Household Budget Survey using the stratification method. EE, SK and SE have developed a user cost method, which they applied as the share of market rents is very small in their country. This practice is in line with the Eurostat recommendations.

The only EU Member State which did not strictly follow the Eurostat guidelines is the Czech Republic. But, this country investigated deeply the issue and the main problem, which makes the rent imputation difficult, is that there is too low share of households paying market rent in this country. Only 4.6% of tenants pay market rent in the EU-SILC sample. 13.5% of households included in the sample pay rent that is regulated by the Czech government. They tested the 3 following methods: subjective method, stratification method, Heckman model, and finally they decided for subjective method, because it seemed best in the Czech conditions.

Variables taken into account are rather country-specific however some variables like localisation and urbanisation, size of dwelling (in square meter and in number of rooms), amenities (bathroom, balcony, garden, etc.) are common to all models.

## **2.7. Company cars and non-cash employee income**

From 2007 on, PY020 refers to “Other non-cash employee income” and PY021 to “Income from private use of company car”. For the employee non-cash income (PY020) divergences are found only in France and it was not collected in the Netherlands; while for company car (PY021) France and Portugal did not fill in this variable.

## **3. TIMELINESS AND PUNCTUALITY**

### **3.1. Cross-sectional data**

Regulation (EC) No 1177/2003 states that: “...The extreme deadline for the transmission of micro-data to Eurostat shall be 30 November (N+1) for Member States where data are collected at the end of year N or through a continuous survey or through registers and 1 October (N+1) for other Member States”.

The information by country on the deadline established by the Regulation as well as information on the date of first data transmission, the number of transmissions and the date of last transmission - can be found in annex 3 of this report.

The first cross-sectional micro-data for the 2010 operation were received in Eurostat on 29 April 2011 (Latvia). Only fifteen countries had delivered clean micro-data files by September 2011. Less than the half of countries kept the deadline of Regulation n°1177/2003 and on the contrary seventeen countries could not implement the finalisation of the micro-dataset before the end of 2011.

About the timeliness of the cross-sectional indicators, all indicators were uploaded on the Eurostat Website as soon as they were validated and revised on the Eurostat Website every month around the 15<sup>th</sup> of the month, if needed.

The 2010 cross-sectional Users' database was released in March 2011 and 27 countries were included on it.

### 3.2. Longitudinal data

For the longitudinal component, the Regulation (EC) No 1177/2003 states the following: "...The mandatory deadline for the transmission of micro-data to Eurostat shall be the end of March (N+2), each year starting from the second year of EU-SILC". Grants to Member States had different deadlines but all of them were earlier than the one in the Regulation.

As for the cross section component, Annex 3 gives information by country on the deadline established by the Regulation, the date of first data transmission, the number of transmissions and the date of last transmission.

The 2010 longitudinal micro-data files include the 2007 - 2010 individual trajectories of 27 EU Member States plus Iceland and Norway. The first longitudinal micro-data for the 2010 operation were received by Eurostat in September 2011 (Slovenia). Twenty-four out of twenty-nine countries managed to provide Eurostat with a first data transmission by 31 March 2012 (mandatory deadline).

The indicator "persistent at risk of poverty rate" was computed and uploaded on the Eurostat website in mid April 2012 for the 2010 operation, after consultation with the concerned countries. As for other indicators the update of this indicator occurs monthly around mid month.

The 2010 longitudinal Users' database was released for the first time in August 2012 and then revised in March 2013. It includes 27 countries.

### 3.3. Quality reports

The deadline established in the Regulation (EC) No 1177/2003 for the transmission of the national final quality reports is end of year N+2 and almost all countries met the deadline.

## 4. ACCESSIBILITY AND CLARITY

In accordance with Commission Regulation 831/2002, the Commission has released SILC anonymized micro-data via CD-ROM to researchers. The UDB (User database) with the cross-sectional 2010 micro-data was sent to countries and contractors<sup>5</sup> in March 2012, while the UDB containing the longitudinal 2010 micro-data was released for the first time in August 2012.

In addition, agreed indicators on social inclusion and additional indicators as well as are available to the external users free of charge on Eurostat website -mainly in the SILC dedicated section but not only.

Public information on data coding as well as methodological description of EU-SILC is available at [Circabc](#)<sup>6</sup>. Furthermore, there is a dedicated section on the website of Eurostat containing key information on Income, Social Inclusion and Living conditions as well as on the EU2020 poverty target including:

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<sup>5</sup> The term "contractors" includes universities, research institutes and some other bodies.

<sup>6</sup> [https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp?FormPrincipal:\\_idcl=FormPrincipal:left-menu-link-lib-closed&FormPrincipal\\_SUBMIT=1&javax.faces.ViewState=r00ABXVyABNBTGphdmEubGFuZy5PYmplY3Q7kM5YnxBzKWwCAAB4cAAAAAN0AAE1cHQAKy9qc3AvZXh0ZW5zaW9uL3dhaS9uYXZpZ2F0aW9uL2NvbnRhaW51ci5qc3A=](https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp?FormPrincipal:_idcl=FormPrincipal:left-menu-link-lib-closed&FormPrincipal_SUBMIT=1&javax.faces.ViewState=r00ABXVyABNBTGphdmEubGFuZy5PYmplY3Q7kM5YnxBzKWwCAAB4cAAAAAN0AAE1cHQAKy9qc3AvZXh0ZW5zaW9uL3dhaS9uYXZpZ2F0aW9uL2NvbnRhaW51ci5qc3A=)

- a. Statistical books
- b. Statistics in focus
- c. New releases
- d. Methodologies and working papers

Finally, it is worth to mention that two Statistics in Focus closely related to 2010 data have been disseminated in the last months:

- Children were the age group at the highest risk of poverty or social exclusion in 2011 – Issue number 4/2013
- Living standards falling in most Member States – Issue number 8/2013

## 5. COMPARABILITY

Comparability refers to a common set of concepts and definitions that shall be applied by the countries when designing the survey and collecting the data. It encompasses both basic definitions (reference population, private household, household membership...) and income concepts (employee income, self-employment income...).

Commission Regulation 1980/2003 establishes the framework for comparability, which has set out standard definitions as accurately as possible to cover most of the cases that might be encountered in practice. Some degree of flexibility is allowed regarding the definitions but countries have to report on deviations and their estimated impact in the national quality report.

### 5.1. Basic concepts and definitions

To ensure comparability of data similar definitions should be used by countries. This section summarizes the deviations from the standard definitions reported by countries. In the 2010 EU Comparative Intermediate Quality Report there is detailed information on this aspect, one table on the adherence/deviation to the standard definition on the reference population, the private household and the household membership and a second table on the reference period for income, for taxes on income and social insurance contributions and for taxes on wealth. This section presents a summary of the conclusions by item.

**Table 7:** Basic concepts and definitions: are the standard EU-SILC definitions used?

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR
<b>Reference population</b>	F	F	F	F	F	L	:	F	F	F
<b>Private household definition</b>	F	F	F	F	F	F	:	F	F	F
<b>Household membership</b>	F	F	F	F	F	F	:	F	L	F

	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL
<b>Reference population</b>	F	F	F	F	F	F	F	F	F	F
<b>Private household definition</b>	L	F	F	F	F	F	F	F	F	F
<b>Household membership</b>	L	F	F	F	F	F	F	F	F	F

	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH
<b>Reference population</b>	F	L	F	F	F	F	F	F	F	F
<b>Private household definition</b>	F	F	F	F	F	F	L	F	F	F
<b>Household membership</b>	L	F	F	F	F	L	L	F	F	F

F: fully comparable; L: largely comparable

Source: National Intermediate Quality Reports 2010

Most countries follow the standard definitions with only some exceptions:

- Reference population: Romania and Estonia.
- Private household definition: Italy and the United Kingdom.
- Household membership: Spain, Italy, Portugal, Sweden and the United Kingdom.

**Table 8:** Reference period by country (2010)

Country	Income reference period (year)	The reference period for taxes on income and social insurance	Taxes on wealth	Lag between income ref. period and current variable (month)
BE	2009 (fixed 12-month period)	2009	Na	4-12
BG	2009	2009	2009	5-7
CZ	2009	2009	2009	3-4
DK	2009	2009	2009	4-6
DE	2009	2009	2009	4-11
EE	2009	2009	2009	3-7
EL	2009	2009	2009	3-6
ES	2009	2009	Na	2-6
FR	2009	2009	1/01/2009	5-6
IT	2009	2009	2009	10
CY	2009	2009	2009	3-7
LV	2009	2009	2009	3-7
LT	2009	2009	2009	2-7
LU	2009	2008	Na	1-7
HU	2009	2009	2009	3
MT	2009	2009	Na	6 -10
NL	2009	2009	Na	5-9
AT	2009	2009	Na	3-11
PL	2009	2009	2009	5
PT	2009	2009	2009	4-7
RO	2009	2009	2009	5
SI	2009	2009	2009	2-6
SK	2009	2009	2009	4
FI	2009	2009	2009	0-5
SE	2009	2009	2009	12
UK	Centred around interview date	Centred around interview date	Financial years April09-March10 April10-March11	0
IS	2009	2009	2009	2-4
NO	2009	2009	2009	0-6
CH	2009	2009	2009	3-7

Source: National Intermediate Quality Reports 2010; NA: Not applicable - this tax does not exist in the country

The reference period for the majority of countries is the previous calendar year with the only exception of the United Kingdom where:

- a centred reference period around the interview date<sup>7</sup> was used;
- as well as the financial years April 2009 – March 2010 and April 2010 – March 2011 as reference period for taxes on wealth.

### **Time lag**

The lag in months between income reference period and current variables differs from country to country, from the United Kingdom with no time lag to Sweden and Belgium with up to 12 months lag.

### **Fieldwork duration**

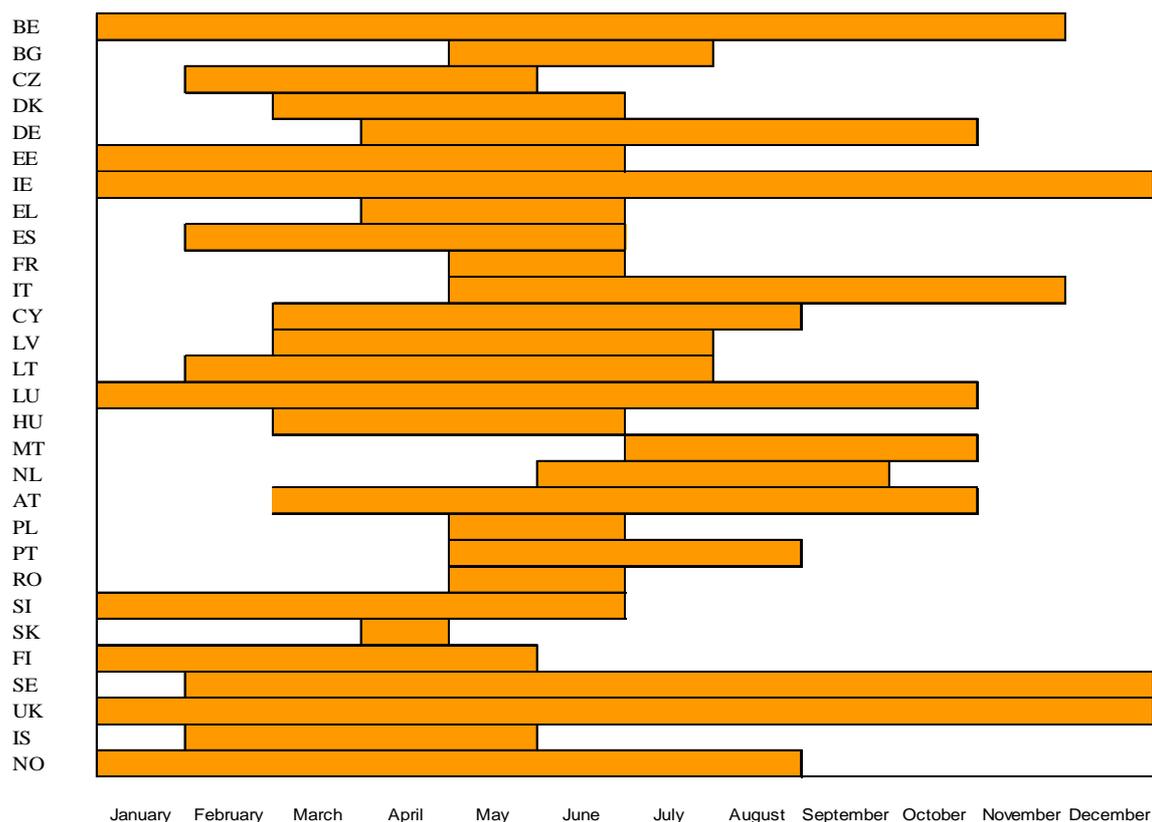
The fieldwork in most of the countries lasted between three and five months. There were only two countries with a shorter (Poland and Slovakia) and six countries with longer fieldwork duration (Belgium, Ireland, Luxembourg, Sweden, the United Kingdom and Norway).

The following chart summarizes the fieldwork period by country; figures correspond to the information on the month of the household interview (HB050). The coloured cells correspond to the month when the interviews took place.

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<sup>7</sup> Comment from the United Kingdom: "...The survey measures current income. So for example, for income from earnings and benefits, respondents will provide figures which relate most commonly to the last week, two weeks, or month. With earnings in particular, respondents are asked for usual earnings. These figures, which represent current (and usual) incomes are then annualised (weekly estimates multiplied by 52, monthly by 12 etc). Income from self-employment can be reported for a variety of periods, but it is always up-rated (using the UK's average earnings index) to the interview date. For income from investment and employee non-cash income respondents are most likely provide their most recent annual or half-yearly income that they received from this source. This income would be annualised, although there is no up-rating..."

**Figure 2** Fieldwork period for the 2010 L component by country



Source: Micro-database (March 2010)

It can be concluded that in 2010 most of the countries (16) finished the fieldwork period by July, with the following exceptions: Cyprus, Portugal and Norway (in August), the Netherlands (in September), Austria, Germany, Luxembourg and Malta (in October), Belgium and Italy (in November) and Sweden Ireland and the United Kingdom (in December).

## 5.2. Components of income

Regarding the components of income some flexibility has been allowed to the definitions, particularly for taking into account national constraints. Countries report on any differences between the national definitions and the standard EU-SILC definition. Two summary tables by country and income component can be found in the annex of the 2010 EU Comparative Intermediate Quality Report, one on household income components and one on personal income components, plus all the comments received by countries.

## 5.3. Tracing rules

Tracing rules are defined in Commission Regulation EC 1982/2003. Most of the countries follow the common rules, and some of them report in detail the procedure. The following table summarizes the information in the national quality reports.

**Table 9: Tracing rules by country**

Country	Code	Comments from countries
BE	L	Not reported
BG	F	Standard EU-SILC tracing rules are applied
CZ	F	Standard EU-SILC tracing rules are applied
DK	F	"Tracing was conducted using the personal number in the population register. In principle there is no difference from national rules and the standard EU-rules."
DE	F	For the second year of the longitudinal component, the tracing rules as laid down in the document EU-SILC 065 were applied.
EE	F	Standard EU-SILC tracing rules are applied
IE	N	No quality report delivered
EL	F	Standard EU-SILC tracing rules are applied
ES	F	Standard EU-SILC tracing rules are applied
FR		No quality report delivered
IT	F	Standard EU-SILC tracing rules are applied
CY	F	No quality report delivered
LV	F	For the second, third and the fourth waves tracing rules were applied for a longitudinal component according to the description of the document EU-SILC 065. To identify the residence of a person moving from one address to another address, the information from the Household List (an additional document to record personal data about the household member for tracing purposes) of the previous wave and the Population Register was used.  There were no divergences from common standards.
LT	F	Standard EU-SILC tracing rules are applied
LU	F	Standard EU-SILC tracing rules are applied
HU	F	Standard EU-SILC tracing rules are applied
MT	F	The EU-SILC tracing rules have been implemented in the tracing procedure. In an attempt to facilitate this procedure the questionnaire incorporates a question that asks about the intention or expectation to move house in the 12 months following the interview.
NL	F	Standard EU-SILC tracing rules are applied.
AT	F	For all four waves of the longitudinal component of EU-SILC, the tracing rules as laid down in the document EU-SILC 065 were applied. To identify the residence of persons moving from one address to another address, Statistics Austria made use of the ZMR.
PL	F	Standard EU-SILC tracing rules are applied
PT	F	Standard EU-SILC tracing rules are applied
RO	F	Standard EU-SILC tracing rules are applied
SI	F	Due to the fact that in Slovenia we use sample of persons and each household has only one selected person, we traced only the selected person. These persons are at least 16 years old .We trace to such person, if he/she moves in the territory of Slovenia. If the sample person moved permanently into institution or collective household, such household was excluded from survey. We excluded from survey also households where the sampled person died. In the case that sampled person moved interviewers (CAPI) had to fill in special form, where they wrote new address, if they found it from persons who live in the address or from neighbours. They sent to the office these forms with new addresses and in the office we prepared additional list of sampled persons which we sent to appropriate interviewer. In the case that move person who was interviewed by phone, interviewer wrote the new address into the computer program and after the CATI interviewing period was finished, we sent all lists to the appropriate interviewers. In the case that interviewer could not get a new address, in the Statistical office we tried to find new address from other sources. This way all selected persons and their households who moved are interviewed face to face under condition that we got new address.
SK	F	Procedure of tracing of households and persons:

		<p>1. If whole household moved out, interviewer had to find out its new address by all available sources. This information could be obtained from neighbours or relatives, municipal/communal office and others. Interviewer provide new address of household, name and surname of the head of the household in relevant form and also filled ID number of household and this form gave to coordinator of the Regional Office in period at least 3 days. Consequently coordinator decided on another procedure to continue in this circumstance.</p> <p>2. Similarly interviewer proceeded in the case of one or more selected persons moved out. Basic source of information on place of moving of selected person/persons was information received from other household members. For each person moved out interviewer completed relevant form, where was listed new address of this person again, his/her name and surname, household ID and personal ID.</p> <p>3. In the case if interviewer was entrusted to collect data for household or person moved out, needed information was received from coordinator of the relevant Regional Office.</p>
<b>FI</b>	<b>F</b>	The tracing rules for the follow-up of sample persons, sample households and co-residents have been followed in the longitudinal survey according to the EU-SILC requirements framework. Because of the sampling design and the sampling unit definition used (the selected individuals); only the initial sample persons of the first wave are followed over the survey years/waves. Acceptance of household interview for database (DB135=1) from the previous wave is provided for continuing in the wave of the survey year. Households of the survey year are constructed and household members are defined (mostly co-residents, see the household membership definition) around these sample persons. Household members include the ones who are currently (end of the income reference period, 31 December) living in the households containing the initial sample person, the persons who are temporarily absent, and the persons who have moved and born into the household since the previous wave. Membership status is checked in each wave.
<b>SE</b>	<b>F</b>	The sampling unit is individual, and we include all household-members at the time when the sample is drawn the first year. During the following three year the sampled individuals are included in the panel wave, and there household-situation is examined. If there original household from the first year has been split, we only follow the sampled individual. The household-situation for not sampled household-members is not examined if they no longer belong to the household of the sampled individuals.
<b>UK</b>	<b>L</b>	For UK EU-SILC 2007, persons aged 14 and above who could not be contacted in 2006 where not always re-contacted in 2006. Furthermore, information on former residents was not collected. A similar process was followed between 2007 and 2008, and 2008 and 2009.
<b>IS</b>	<b>F</b>	We only trace the selected respondent and if he or she has new household-partners they will be included in the survey. The information used for tracing are received from the national register, information on phone numbers are received from the largest phone company in Iceland. Information from former household members is also used to help locate selected respondents if the selected respondent has moved.
<b>NO</b>	<b>L</b>	They only trace the selected respondent. Tracing is done by using updated data from the population register, data from the previous data collection and by searching for phone numbers.

Source: National Final Quality Reports 2010

F (fully), L (largely), P (partly), N (not comparable), (No information).

We can conclude that the large majority of countries follow the standard rules.

## 6. COHERENCE

In each survey or administrative data variables similar to those in EU-SILC can be found and then the definitions and data can be compared taking as starting point EU-SILC variables.

There is a variety of sources to analyse the coherence of EU-SILC. The sources mostly used by the countries to compare EU-SILC data are: previous operations of EU-SILC (considered as an analysis of the comparability of the data), Household Budget Survey (HBS), Labour Force Survey (LFS), National Accounts (NA) and administrative sources.

The information presented on this section of the national quality report varies greatly among countries. Some countries only explain that they did coherence studies but do not present the results in the national quality report. The table below presents a summary of which coherence studies were carried out with 2010 data by country.

**Table 10:** Comparison between EU-SILC and other datasets (2010)

	Comparison with:					
	Labour Force Survey	Household Budget Survey	National Accounts	Administrative sources	Previous EU-SILC 2008	Other sources
BE	:	:	:	:	:	X
BG	X	X	:	X	X	X
CZ	:	:	X	X	:	:
DK						
DE	:	X	:	:	X	:
EE	X	:	X	X	X	X
IE	:	:	:	:	:	:
EL	X	X	:	X	X	X
ES	X	:	X	X	X	:
FR	:	:	:	:	:	X
IT	X	:	X	X	:	:
CY	X	:	:	:	X	X
LV	X	X	:	X	:	X
LT	X	X	:	X	:	X
LU	:	:	:	:	:	:
HU	X	:	:	:	X	
MT	X	:	X	X	X	X
NL	:	:	:	:	X	X
AT	:	:	X	:	X	X
PL	:	X	X	:	X	:
PT	:	X	:	:	:	:
RO	:	X	:	:	:	:
SI	X	X	X	:	X	X
SK	X	X	:	X	X	X
FI	X	:	X	X	X	X
SE	:	:	:	:	:	:
UK	:	:	:	:	X	X
IS	:	:	:	:	:	:
NO	:	:	:	:	:	:
CH		X	:	:	:	:

Source: National Intermediate Quality Reports 2010

The majority of countries performed coherence studies based on 2009 SILC data. The only exceptions are: on the one hand, Luxembourg because of the difficulties to gather income information on ‘cross-border’ workers and international officials; and on the other hand, some register countries (Sweden, Norway and Iceland) because EU-SILC data already come from registers.

The main conclusions from this table are the following:

- Ten countries compared data with HBS, thirteen with LFS and nine with National Accounts.
- Nine Member States did comparison with administrative sources.
- Eleven countries compared 2010 data with previous years, mainly with 2009 data.
- Fifteen countries carried out coherence studies with other national sources.

## Annex 1: Mode of data collection

**Table 11: Mode of data collection\* (longitudinal 2010)**

	Wave 2007				Wave 2008				Wave 2009				Wave 2010			
	PAPI	CAPI	CATI	S. A.	PAPI	CAPI	CATI	S. A.	PAPI	CAPI	CATI	S. A.	PAPI	CAPI	CATI	S. A.
AT	.	100	.	.	.	85.16	14.84	.	.	64.54	35.46	.	.	42.01	57.99	.
BE	.	100	.	.	.	100	.	.	.	100	.	.	.	100	.	.
BG	100	.	.	.	100	.	.	.	100	.	.	.	100	.	.	.
CY	0.05	99.95	.	.	0.21	99.79	.	.	0.09	99.91	.	.	0.02	99.98	.	.
CZ	99.71	.	.	0.29	62.71	37.19	.	0.09	68.44	31.53	.	0.03	67.72	32.22	.	0.06
DE	.	.	.	100	.	.	.	100	.	.	.	100	.	.	.	100
DK	.	.	96.63	3.37	.	.	96.55	3.45	.	.	95.03	4.97	.	.	93.7	6.3
EE	3.44	96.26	0.26	0.03	3.65	95.97	0.38	.	2.24	97.53	0.19	0.05	1.43	98.08	0.49	.
ES	.	94.12	5.88	.	.	92.65	7.35	.	.	92.85	7.15	.	.	76.69	23.31	.
FI	.	5.22	94.78	.	.	2.8	97.2	.	.	2.61	97.39	.	.	1.66	98.34	.
FR	.	100	.	.	.	100	.	.	.	100	.	.	.	100	.	.
HU	100	.	.	.	100	.	.	.	100	.	.	.	100	.	.	.
IE	.	100	.	.	.	100	.	.	.	100	.	.	.	100	.	.
IS	.	.	100	.	.	.	100	.	.	.	100	.	.	.	100	.
IT	100	.	.	.	100	.	.	.	100	.	.	.	100	.	.	.
LT	96.55	.	2.44	1.01	82.43	.	16.99	0.58	71.49	.	28.07	0.45	50.04	.	49.43	0.53
LU	100	.	.	.	100	.	.	.	100	.	.	.	100	.	.	.
LV	14.71	78.69	6.54	0.07	9.54	78.79	11.53	0.13	7.43	60.76	31.73	0.09	2.8	62.2	34.98	0.02
MT	.	100	.	.	.	100	.	.	.	100	.	.	.	100	.	.
NL	.	.	100	.	.	.	100	.	.	.	100	.	.	.	100	.
NO	.	0.68	99.32	.	.	1.02	98.98	.	.	1.36	98.64	.	.	0.83	99.17	.
PL	100	.	.	.	100	.	.	.	100	.	.	.	100	.	.	.

<b>PT</b>	6.04	93.96	.	.	4.83	95.17	.	.	3.63	96.37	.	.	4.82	95.18	.	.
<b>RO</b>	100	.	.	.	100	.	.	.	100	.	.	.	100	.	.	.
<b>SE</b>	.	.	100	.	0.25	.	99.75	.	0.21	.	99.79	.	0.1	.	99.9	.
<b>SI</b>	.	100	.	.	.	70.28	29.72	.	.	54.32	45.68	.	.	13.46	86.54	.
<b>SK</b>	99.49	.	.	0.51	99.57	.	.	0.43	99.63	.	.	0.37	99.61	.	.	0.39
<b>UK</b>	.	100	.	.	.	99.91	0.09	.	.	100	.	.	.	100	.	.

Source: Micro-database (May 2013)

\* PAPI: Paper Assisted Personal Interview; CAPI: Computer Assisted Personal Interview; CATI: Computer Assisted Telephone Interview; S.A.: Self-administrated questionnaire

## Annex 2: Proxy interview

**Table 12:** Proxy interviews (longitudinal), %

	2006	2007	2008	2009
AT	18.47	25.05	21.76	15.78
BE	12.37	15.32	12.68	8.85
BG	28.64	19.28	18.38	20.48
CY	16.5	17.52	20.75	23.5
CZ	8.96	17.24	17.39	19.34
DE	18.69	19.92	19.01	20.12
DK	50.2	49.54	49.2	48.45
EE	10.4	12.84	21.57	24.57
EL	5.23	6.87	8.09	8.21
ES	40.99	39.35	39.59	22.56
FI	43.77	50.39	46.94	43.09
FR	28.05	28.12	27.51	28.39
HU	23.13	18.06	11.53	19.49
IE	27.44	30.63	27.52	24.73
IT	15.4	18.49	18.86	19.04
LT	18.47	16.63	14.06	16.69
LU	23.01	24.01	18.5	19.83
LV	4.49	9.75	18.15	27.28
MT	29.45	19.92	30.38	28.54
NL	7.97	0.97	1.65	0.53
NO	26.47	27.75	24.37	23.87
PL	17.1	17.45	17.89	19.12
PT	14.66	17.36	18.25	20.54
RO	19.44	20.15	13.85	15.2
SE	5.81	3.06	2.41	1.48
SI	23.68	21.44	23.48	27.58
SK	6.98	4.97	4.64	4.65
UK	9.07	11.68	10.95	8.69

Source: Micro-database (May 2013)

### Annex 3: Timeliness and punctuality

**Table 13: Follow-up cross-sectional data (2010)**

	Regulation deadline	First transmission	Number of transmissions before acceptance	Last transmission before acceptance
AT	01/10/2011	08/07/2011	2	01/09/2011
BE	01/10/2011	29/09/2011	5	<b>13/10/2011</b>
BG	01/10/2011	21/09/2011	2	21/09/2011
CY	01/10/2011	<b>14/02/2012</b>	1	<b>14/02/2012</b>
CZ	01/10/2011	05/08/2011	2	05/08/2011
DE	01/10/2011	29/09/2011	3	30/09/2011
DK	30/11/2011	11/10/2011	8	02/11/2011
EE	01/10/2011	31/08/2011	2	31/08/2011
ES	01/10/2011	15/09/2011	2	15/09/2011
FI	30/11/2011	20/05/2011	2	<b>14/08/2012</b>
FR	01/10/2011	<b>18/10/2011</b>	3	<b>21/10/2011</b>
EL	01/10/2011	<b>07/11/2011</b>	2	<b>09/11/2011</b>
HU	01/10/2011	29/04/2011	2	07/07/2011
IE	30/11/2011	<b>26/01/2012</b>	7	<b>27/01/2012</b>
IT	01/10/2011	<b>27/10/2011</b>	2	<b>07/11/2011</b>
LT	01/10/2011	21/07/2011	2	21/07/2011
LU	01/10/2011	19/09/2011	1	19/09/2011
LV	01/10/2011	01/02/2011	3	24/03/2011
MT	01/10/2011	28/09/2011	5	
NL	30/11/2011	29/09/2011	4	29/09/2011
PL	01/10/2011	31/08/2011	3	31/08/2011
PT	01/10/2011	29/09/2011	1	29/09/2011
RO	01/10/2011	04/07/2011	4	<b>09/11/2011</b>
SE	30/11/2011	14/09/2011	1	14/09/2011
SI	30/11/2011	31/08/2011	2	31/08/2011
SK	01/10/2011	<b>02/11/2011</b>	3	<b>03/11/2011</b>
UK	30/11/2011	07/11/2011	4	<b>14/12/2011</b>
HR		27/10/2011	3	12/12/2011
IS	30/11/2011	31/10/2011	5	<b>17/04/2012</b>
NO	30/11/2011	04/10/2011	2	11/10/2011
CH	01/10/2011	03/10/2011	2	30/11/2011

Source: eDamis (May 2013) and Regulation (EC) No 1177/2003

**Table 14:** Follow-up longitudinal data (2010)

	<b>Regulation deadline</b>	<b>First transmission</b>	<b>Number of transmissions</b>	<b>Last transmission</b>
<b>AT</b>	31/03/2011	31/01/2012	2	21/02/2012
<b>DE</b>	31/03/2011	29/03/2012	3	04/05/2012
<b>DK</b>	31/03/2011	21/03/2012	3	02/05/2012
<b>EL</b>	31/03/2011	11/04/2012	1	11/04/2012
<b>IT</b>	31/03/2011	31/01/2012	2	23/02/2012
<b>LV</b>	31/03/2011	30/03/2012	2	28/04/2012
<b>MT</b>	31/03/2011	16/03/2012	2	24/07/2012
<b>SE</b>	31/03/2011	25/01/2012	2	24/02/2012
<b>SK</b>	31/03/2011	24/08/2012	1	24/08/2012
<b>BE</b>	31/03/2011	30/03/2012	2	15/05/2012
<b>BG</b>	31/03/2011	27/03/2012	2	15/05/2012
<b>CY</b>	31/03/2011	12/07/2012	1	12/07/2012
<b>CZ</b>	31/03/2011	27/01/2012	2	21/03/2012
<b>EE</b>	31/03/2011	30/12/2011	1	30/12/2011
<b>ES</b>	31/03/2011	01/02/2012	2	01/03/2012
<b>FI</b>	31/03/2011	30/01/2012	1	05/06/2012
<b>FR</b>	31/03/2011	30/05/2012	3	19/11/2012
<b>HU</b>	31/03/2011	14/03/2012	4	03/05/2012
<b>IE</b>	31/03/2011	12/10/2012		12/10/2012
<b>LT</b>	31/03/2011	02/03/2012	2	19/03/2011
<b>LU</b>	31/03/2011	21/03/2012	4	14/05/2012
<b>NL</b>	31/03/2011	02/03/2012	3	27/03/2012
<b>PL</b>	31/03/2011	16/11/2011	2	13/03/2012
<b>PT</b>	31/03/2011	22/03/2011	2	28/03/2012
<b>RO</b>	31/03/2011	30/03/2012	5	17/05/2012
<b>SI</b>	31/03/2011	30/09/2011	1	30/09/2011
<b>UK</b>	31/03/2011	28/03/2012	1	28/03/2012
<b>IS</b>	31/03/2011	07/02/2012	2	30/03/2012
<b>NO</b>	31/03/2011	13/03/2012	2	21/03/2012

Source: eDamis (May 2013) and Regulation (EC) No 1177/2003.