Statistics Finland

INTERMEDIATE QUALITY REPORT

relating to the EU-SILC 2009 operation

Statistics Finland

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1 Common cross-sectional European Union indicators

1.1 Common cross-sectional EU indicators based on the cross-sectional component of EU-SILC 2009

Table 1.1 Portfolio of overarching indicators, Streamlined Social Inclusion Portfolio: Social Inclusion indicators and Portfolio of Pension (adequacy of pensions) Indicators calculated from EU-SILC

Portfolio of overarching indicators calculated from EU-SILC		
[OV-1] At-risk-of-poverty threshold (illustrative values)		
hhtyp	currency	2009
A1 (Single person)	EUR	12577.2
	NAC	12577.2
	PPS	10116.6
A2_2CH_LT14 (Two adults with two children younger than 14 years)	EUR	26412.1
	NAC	26412.1
	PPS	21244.9
[OV-1a] At-risk-of-poverty rate by age and gender		
age	sex	2009
TOTAL	T	13.8
	M	12.9
	F	14.7
Y0_17	T	12.1
Y18_64	T	12.2
	M	13.0
	F	11.4
Y65_MAX	T	22.1
	M	13.1
	F	28.4
[OV-1b] Relative median at-risk-of-poverty gap (by age and gender)		
age	sex	2009
TOTAL	T	15.1
	M	16.6
	F	14.6
Y0_17	T	15.0
Y18_64	T	19.2
	M	20.1
	F	18.3
Y65_MAX	T	10.9
	M	9.4
	F	11.5
[OV-9] At-risk-of-poverty rate anchored at a fixed moment in time (2005) (by age and gender)		
age	sex	2009
TOTAL	T	9.4
	M	8.8
	F	10.0
Y0_17	T	8.2
Y18_64	T	8.8
	M	9.5
	F	8.1
Y65_MAX	T	13.4
	M	6.6
	F	18.2

[OV-11] In-work at-risk-of-poverty rate (by gender)- Of which: 'At work', females, 16+		
sex		2009
T		3.7
M		4.0
F		3.4
[OV-2] Inequality of income distribution S80/S20 income quintile share ratio		
indic_il		2009
S80_S20		3.7
[OV-7a] Relative median income ratio		
indic_il		2009
R_GE65_45TO54 (Persons aged 65 years and over compared to persons aged between 45 and 54 years)		0.73
[OV-7b] Aggregate replacement ratio		
indic_il	sex	2009
R_PN_WK (Ratio of income from pensions of persons aged between 65 and 74 years and income from work of persons aged between 50 and 59 years)	T	0.48
	M	0.47
	F	0.47
[OV-C11] At-risk-of-poverty rate before social transfers (by age and gender		
age	sex	2009
Total	T	38.6
	M	36.2
	F	40.9
Y0_17	T	28.3
Y18_64	T	28.1
	M	27.4
	F	28.9
Y65_MAX	T	91.3
	M	88.6
	F	93.2

1.2 Other indicators

1.2.1 Equivalised disposable income

Table 1.2 The mean equivalised disposable income

The mean of equivalised disposable income	currency	2009
	EUR	23 119.1
	NAC	23 119.1
	PPS	18 596.2

1.2.2 The unadjusted gender pay gap

Unadjusted gender pay gap indicator is not computed from the Finland's EU-SILC data.

2 Accuracy

2.1 Sample design

The sampling design of the Finnish EU-SILC survey, the collection year 2009, (also parallel with the design of the Finnish Income Distribution Survey [IDS]) is a **two-phase sampling design**. The copy of the population register some weeks before the end of the study year included 4,293,272 non-institutional persons aged 16 years or over. The type of the frame was based on the domicile code, i.e. very exact identification of all the possible places where people can live. The first digits of this code include regional information (municipality code). Systematic sampling of persons was carried out from that frame in order to get the basis for a master sample (50,000). After various checks and combinations we get 49,101 dwelling units with all their relevant members. The loss of 899 persons is due to the difference between the register which the selector of the master sample has and the final population register of the end of the study year. This final information (coming with the tax information to be connected to the master sample in order to create the strata, for example) is available after the master sample has been selected. At this point those who have died, moved permanently abroad or placed into an institution after the time point of the copy of the register and before the end of the year are excluded from the master sample. With this processing we correct the effect of the frame imperfection (not exactly describing the right time) in the sample.

This master sample of dwelling units is used for different sampling purposes, and one of them is the Income Distribution Survey. For that the master sample is stratified by socio-economic criteria, emphasising high-earners, farmers and entrepreneurs in the allocation. The sample size of the first wave is 7,500. The second wave of the IDS (5,484) is included in the set of households to be interviewed. The final definition of the structure of the household is done during the interview. The stratum is identified for these IDS waves separately in the variable DB050.

Referring to the description of the sampling design above it can be observed that
* **the Finnish cross-sectional data 2009 are based on a nationally representative probability sample of the population residing in private households** (non-institutionalised persons, two-phase sampling in both IDS waves),
* **all private households and all persons aged 16 and over within the household are eligible for the operation** (selection of persons, creation of dwelling units around persons and definition of households during the interviews),
* **representative probability samples are achieved both for households, which are the basic units of sampling, data collection and data analysis, and for individual persons in the target population** (selection of persons aged 16 and over from the register, creation of dwelling units around persons and definition of households during the interviews), and
* **the sampling frame and methods of sample selection ensure that every individual and household in the target population is assigned a known and non-zero probability of selection** (for every non-institutionalised person the probability of selection is identified and greater than zero).

2.1.1 Type of sampling design

A two-phase stratified sampling design.

2.1.2 Sampling units

The sampling unit is a person. In the first phase persons are selected (target persons), in the second phase the target persons together with their dwelling units are selected.

2.1.3 Stratification criteria

The SILC data selection follows parallelly the sampling design of the Income Distribution Survey. The IDS stratification is conducted in the first-phase master sample containing dwelling units. The strata are created by using a socio-economic categorisation based on the register information available for the members at the time of sample selection. The stratification takes the highest earning person as the categorising person, but the entrepreneur need not be the highest earning one to define the household in the class of entrepreneurs. The income class division is used to allocate the sample more to high-earners. The stratification variable is DB050, containing values 1-13 for the first IDS wave and 14-26 for the second IDS wave, based on the dwelling units created around the selected persons.

Table 2.1 Stratification criteria for the Finnish EU-SILC and IDS

IDS Wave 1 (CY2009)			IDS Wave 2 (CY2008)		
Socio-economic categorisation of the household	Income Class	Stratum code	Socio-economic categorisation of the target person	Income Class	Stratum code
Wage earners	Lowest	1	Wage earners	Lowest	14
	2nd lowest	2		2nd lowest	15
	3rd lowest	3		3rd lowest	16
	Highest	4		Highest	17
Entrepreneurs	Lower	5	Entrepreneurs	Lower	18
	Higher	6		Higher	19
Farmers	Lower	7	Farmers	Lower	20
	Higher	8		Higher	21
Pensioners	Lower	9	Pensioners	Lower	22
	Higher	10		Higher	23
Others	Lower	11	Others	Lower	24
	Higher	12		Higher	25
No tax information	-	13	No tax information	-	26

2.1.4 Sample size and allocation criteria

The effective sample size and other relevant sample size information of the Finnish EU-SILC sampling design can be found in the following tables.

Table 2.2 Sampling design information

Cross-sectional sample 2009	Value	Definition
Minimum effective sample size	6 750	For household selection, not the case of Finland
Minimum effective sample size (sample of persons)	5 063	Finland uses registers for income and other data; thus a sample of persons (instead of a sample of households) is selected. *Regulation 1177/2003* Article 9 (paragraph 3) states that *"the minimum effective sample size in terms of the number of persons aged 16 or over to be interviewed in detail shall be taken as 75% of the figures shown in columns 3 and 4 of the table in Annex II, for the cross-sectional and longitudinal components respectively"*.
Minimum achieved sample size	6 329	The achieved sample size *"depends on the efficiency of the sample design used (i.e. on the 'design effect')"*. The design effect term ($deft^2$) is *"the ratio of variance of a certain statistics) under the actual design, to that variance under a simple random sample of the same size"*. The reference statistic to be used in the design effect calculations is *at-risk-of-poverty-rate at national level (after social transfers)*. This design effect term for Finland based on the calculations from the Finnish Income Distribution Survey 2001, i.e. here $deft^2$ = **1.25**.
Minimum sample to be selected	8 328	Taking the nonresponse into account, the sample to be selected must be larger in order to get the minimum achieved sample size. For the calculations the overall response rate R is approximately **0.76** in Finland.
Actual sample	12 984	Combined with the structure of the Income Distribution Survey of Finland, the Finnish EU-SILC provides the actual sample to be selected larger than the minimum sample to be selected. This includes 7,500 from the first wave and 5,484 from the second wave of the Income Distribution Survey.
Expected number of respondents	10 670	When excluding the nonresponse (25% for the first wave and 8% for the second wave)
Realised number of accepted respondents	10 137	This includes **5,280** for the first IDS wave and **4,857** for the second IDS wave. **Thus the requirement of the minimum sample to be selected is reached (10,137 > 8,328)**.

Table 2.3 Information concerning stratification

Stratum in the master sample		Master sample		2nd phase sample		2nd phase sample excluding over-coverage		2nd phase accepted respondents	
1st w.	2nd w.	1st w.	2nd w.	1st w.	2nd w.	1st w.	2nd w.	1st w.	2nd w.
1	14	10 878	10 721	1 230	882	1 222	875	829	761
2	15	8 825	8 936	975	734	968	733	709	666
3	16	7 585	7 530	849	644	840	643	615	594
4	17	3 685	3 531	750	572	737	568	514	508
5	18	1 955	1 950	600	439	589	436	421	393
6	19	909	923	450	320	445	317	311	280
7	20	1 084	994	300	249	298	248	250	221
8	21	776	766	276	232	273	229	235	212
9	22	6 308	6 374	750	494	708	478	515	425
10	23	4 715	4 773	600	483	578	471	459	422
11	24	1 950	2 124	453	269	444	269	260	227
12	25	221	299	195	145	193	143	139	129
13	26	210	190	72	21	69	20	23	19
All		49 101	49 111	7 500	5 484	7 364	5 430	5 280	4 857

Note that the strata were created only for those who were not dead or otherwise included in the over-coverage. Stratum variable DB050: 1-13 first wave, 14-26 second wave (i.e. stratum code + 13). The primary response probabilities for each stratum used before calibration can be calculated from this table by using *"number of respondents in the stratum" / "number of selected observations in the stratum ".*

2.1.5 Sample selection schemes

The master sample of persons (1st phase) is selected with **systematic sampling** from the population sorted by the domicile code. The SILC/IDS sample of the first wave with dwelling units constructed around the target persons is selected from the **stratified** master sample with **simple random sampling without replacement** within every stratum and using *non-proportional allocation* (see table 2.3). The IDS second wave respondents from the previous year were selected at that time in the same way.

2.1.6 Sample distribution over time

The income reference period is constant for all households and persons: the calendar year preceding the survey year. The reference population is defined as the population registered as resident in Finland on 31 December 2008. Household composition is also dated 31 December 2008.

In SILC 2009 operation, the fieldwork period streched over five months; it started in January 2009 and ended in May 2009. The cross-sectional sample of the EU-SILC consists of four rotational groups. See table 2.4 for details. The "old panel" fieldwork was started in the beginning of January and lasted till the end of March. The "new panel" households were interviewed in February – May.

Table 2.4 Distribution of interviews through time in the 2009 survey

Month of Interview	Second wave		First wave		Total	
	N	%	N	%	N	%
January	2 170	44.7	1	0.0	2 171	21.4
February	2 606	53.7	835	15.8	3 441	33.9
March	81	1.7	1 935	36.7	2 016	19.9
April	0	0	1 491	28.2	1 491	14.7
May	0	0	1 018	19.3	1 018	10.0
Total	4 857	100.0	5 280	100.0	10 137	100.0

2.1.7 Renewal of sample: rotational groups

The Finnish cross-sectional SILC data collection year 2009 contains two groups based on the Income Distribution Survey: one is a new rotation group (1st IDS wave) and another is a set of responded households of the IDS of the previous year (2nd IDS wave). In other words, the Finnish SILC design is not purely integrative. The wave began in 2009 consists of rotational groups (DB075) 4 and 5, of which group 4 will be interviewed four times and group 5 will be interviewed only twice. The wave began in 2008 consists of rotational groups 3 and 6, of which group 3 belongs in the longitudinal component and will continue to be interviewed in 2010 and 2011. (See also chapter 2.3.3 for further information.) The rationale for this panel structure lies in the tradition of the IDS: the national IDS has consisted of two rotational panels since 1987. For risk of attrition effects this construction was not changed. The size of the cross-section was maintained for national means.

2.1.8 Weightings

2.1.8.1 Design factor

Deft= $\sqrt{1.25}$, see table 2.2.

2.1.8.2 Nonresponse adjustments

The household design weights (see below) were multiplied by $n_{sample,h} / n_{respondents,h}$ in every stratum h.

Calculation of design weights

Separately calculated from the master samples CY 2009 (of size **50,000**) and 2008 (of size **50,000**) we got the population figures for the person selection, e.g., where $\pi_{a,person\,k}$ is the **inclusion probability of the selected person *k*** in the master sample. The **inclusion probabilities of the dwelling units** created around the selected persons in the master sample were $\pi_{ak} = \pi_{a,person\,k} n_{16+,dwelling\,of\,k}$. The **inclusion probabilities of two-phase sampling** (the effect of selecting the master sample and the IDS sample) were calculated, at the second phase based on the stratification (13 strata) of the master sample and the allocation used. For those waves we separately calculated the inclusion probabilities $\pi_k^* = \pi_{ak} \pi_{k|s_a}$, where

$$\pi_{ak} = \pi_{a,person\,k} n_{16+,HH\,of\,k} = \frac{n_{s_a} n_{16+,HH\,of\,k}}{N}$$

and $\pi_{k|s_a} = n_h / N_{h,s_a}$ is the conditional inclusion probability at the second phase taking the stratification of the master sample into account. The Finnish SILC D file has the design weight variable **DB080** (the inverse of the inclusion probability), in which the original design weights were calculated *separately for the two IDS waves* and with a multiplication by 0.5 in order to get coherent information about the households. **PB070** (*personal design weight for selected respondents*) is an estimate of the **inverse of the inclusion probability of the person** (**DB080***$n_{16+,HH}$). *This weight was not needed in the weighting procedure of the IDS*. Again in this case these weights were calculated *separately for both waves*. In addition, the calculation was conducted for *all of the sample* (excluding over-coverage). However, the weight **PB070** is defined only for the households that have been accepted (P file), not all the sample (including non-response). In this case there should be a non-response correction included in the weight in order to get the figures right. We did *the simple adjustment $n_{sample} / n_{respondents}$ in every stratum. In addition,* to get the separate wave effect to disappear, *we multiplied the weights by 0.5.* The sum of the weights is N_{16+}.

2.1.8.3 Adjustments to external data

The nonresponse-adjusted weights were used as input weights in calibration (the raking method) conducted with the macro CALMAR for the accepted households. The calibration process was carried out *separately for both waves*. The calibration could be interpreted as integrative, i.e. both the household and the person levels

were included in the process. The percentual marginal distributions and the statistics used in calibration are the following:

1) <u>Households:</u> province; type of municipality; HH size; sums of 15 different income variables. *The first three distributions of the households were obtained from the master sample, using weights for which a primary calibration (population register: 16+ persons and persons under 16 by region; gender*age class) was conducted. The income information comes from different registers.*

2) <u>Persons</u>**:** gender and age classes (0-4, 5-9, … , 80-84, 85+)

Table 2.5 Description of the calibration variables

Variable name	Description
Alue	Region (NUTS 3 level), Capital region separated
Ask8	Size of dwelling unit
Haastkur	Degree of urbanisation
Mibs01-Mibs18	Men 0-4, 5-9, 10-14, … , 80-84, 85-
Nibs01-Nibs18	Women 0-4, 5-9, 10-14, … , 80-84, 85-
Trplopti	Income 1: Cash or near cash employee income
Saipalk	Income 2: Income 1 > 0
Lelake	Income 3: Pensions
Tyotts	Income 4: Unemployment benefits 1
Perustur	Income 5: Unemployment benefits 2
Saityott	Income 6: Income 4 > 0
Elintul3	Income 7: Income from self-employment
Yhtytulo	Income 8: Capital income 1
Maattulo	Income 9: Income from agriculture
Omaitul2	Income 10: Income from property and forestry 1
Muupaao2	Income 11: Other capital income
Metstulo	Income 12: Income from forestry 2
Myvo	Income 13: Capital gains
Saielake	Income 14: Pensions > 0
Askorot	Mortgage interests

In addition, **2,513,500** was used as the **fixed number of households** in the process. The result of this calibration was the weight that produced exactly these margins when used in the summation of these variables in the data set containing accepted observations. DB090 is this calibrated weight multiplied by 0.5 in order to adjust the effect of separate calculations.

2.1.8.4   Final cross-sectional weights

When DB090 is connected to the R file ("All persons currently living in households or temporarily absent"), these weights (in this context RB050) give the sum which coincides with the exact number of non-institutionalised persons at the end of 2008, i.e. **5,247,446.** Furthermore, when DB090 is linked to the P file ("All eligible persons for whom the information could be completed"), these weights (in this context PB040) give the population of persons aged at least 16 years, i.e. 4,288,228. And linking DB090 to the sample person in R- or P file gives the number of households defined (2,513,500).These operations are in line with the document *"Description of the Target Variables"*, page 38: *"We have DB090 = RB050 = PB040"*.

Finally, the personal cross-sectional weight for the selected respondent, i.e. PB060 is DB090 multiplied by $n_{16+,HH}$. The number of 16+ is fixed in this phase as well.

An additional weight for children aged 0 to 12, i.e. RL070 (*Children cross-sectional weight for child care*) is calculated by multiplying RB050 with the term *"number of non-institutionalised children in age class X from the register" / "number of children in age class X estimated with RB050",* where $X = 0$ to 12.

2.1.9 Substitutions

The Finnish IDS and SILC data contain no substitutions.

2.2 Sampling errors

2.2.1 Standard error and effective sample size

Sampling errors have been provided for the main estimators of the cross sectional data (table 2.6). The "gender pay gap" comes from another source, not utilising the SILC data. Note that this table contains the calculations in general; when these indicators are classified with some variables (e.g. main activity status and work intensity), some item non-response may appear due to the classification variables.

Table 2.6 Effective sample sizes, item non-responses and standard errors of the main estimators

Estimator	Accepted observations in general	Item non-response	Effective sample size	Standard error
Equivalised disposable income	25 157	0	25 157	40.51
At-risk-of-poverty rate after social transfers	25 157	0	25 157	0.347
Inequality of income distribution S80/S20 income quintile share ratio	25 157	0	25 157	0.043
Relative median at-risk-of-poverty gap	25 157	0	25 157	0.597
Dispersion around the risk-of-poverty threshold	25 157	0	25 157	0.144
At-risk-of-poverty rate before social transfers except old-age and survivors' benefits	25 157	0	25 157	0.357
At-risk-of-poverty rate before transfers including old-age and survivors' benefits	25 157	0	25 157	0.347
Inequality of income distribution: Gini coefficient	25 157	0	25 157	0.252

The sampling design of the Finnish EU-SILC and the Finnish Income Distribution Survey is a two-phase design, with simple random sampling without replacement (1st phase) and stratified simple random sampling with unequal allocation emphasising some groups (2nd phase). The standard error calculations are conducted with the bootstrap method (10,000 replications). The idea is to estimate the standard error of the second phase by separately carrying out simple random sampling with replacement in every stratum with the original sample size of the stratum. The calibration has been conducted in every replication, and the weights are an outcome of this process. The variance to be used is simply the variance of the bootstrap estimator. In addition, in order to take the non-negligible sampling fraction into account the variance is multiplied by the finite population correction at the whole sample level, i.e. approximately 0.79. The standard error is the square root of the variance. The standard error of the equivalised disposable income is calculated with the software CLAN.

The variance estimation process includes some aspects of uncertainty. The non-response effect is not taken into account in variance estimation. The with-replacement nature of selection differs from the original selection, and the use of the finite population correction at the general level does not take the non-proportional allocation into account. This may yield obtaining a bit conservative standard error estimates.

2.3 Non-sampling errors

2.3.1 Sampling frame and coverage errors

The target population is the set of elements about which information is wanted and parameter estimates required. The Commission Regulation on sampling and tracing rules states that "*The target population of*

EU-SILC shall be all private households and their current members residing in the territory of the Member State at the time of data collection. Persons living in collective households and in institutions are generally excluded from the target population. Small parts of the national territory amounting to no more than 2% of the national population and the national territories listed in the Regulation may be excluded from EU-SILC, after agreement between the Member States concerned and the Commission (Eurostat)." There is no register of households in Finland, so the selection is based on the population register and the creation of the households begins with the dwelling unit information available in the register.

2.3.1.1 Description of the sampling frame

The sample is drawn from the Population Information System maintained by the Population Register Centre of Finland. The register is a continuously updated population register based on domicile. It is updated daily with information on population changes: births, deaths, migration, immigration and emigration, marriages, divorces, adoptions and changes of names. The Population Information System is a compilation of local registers kept up by population register districts.

The Population Information System (PIS) includes information on Finnish citizens and aliens permanently resident in Finland. It includes persons living in private households, institutions, persons living temporarily abroad, and also homeless persons. Persons living in institutions, collective households or residential homes do not belong to the target population, but they are included in the PIS household population and have to be excluded from the master sample (see below).

Every person residing in Finland has a unique identification code and each dwelling has a domicile code. Each person is registered in the municipality where he/she has a permanent place of residence. The domicile code is the link between a person and his/her permanent dwelling. Persons without an address are registered in municipal registers as homeless persons. A person with a permanent address may also have registered a temporary address. The linkage between identification and domicile codes enables the pre-entry into the IDS-SILC questionnaire of all persons permanently registered in the dwelling unit-households before the interviewer contacts the household.

The copy of the population register some weeks before the end of the study year was the **sampling frame** for the selection of the new Income Distribution Survey (IDS) sample. After the separation of the persons placed in institutions and the homeless (a specific code identifies both cases), this frame included 4,288,228 persons aged 16 years or over. The sort of the frame was based on the domicile code, i.e. a very exact identification of all the possible places where persons can live. This code includes regional information at the beginning (municipality code). That frame is used for the **construction of the dwelling units for the master sample** as well. After various checks and combinations (e.g. excluding collective households, e.g. members of the same hall of residence as the target person) we get the dwelling units with all their relevant members for the selected master sample. Before the fieldwork begins the information of the second panel of the IDS and the changes after the selection of the sample are updated based on the register of the end of the year (then already available).

2.3.1.2 Information about the frame: reference period, updating actions, quality review actions

In general, the Population Information System of the Population Register Centre can be considered exhaustive and up-to-date as regards persons. Updating activities occur constantly. The Population Register Centre updates the official population figures the 5th – 8th day of every month in all municipalities in Finland.

The system is maintained by notifications of changes made by authorities. Maternity hospitals immediately report new-born children to local register offices. Deaths have to be reported at once either to a physician or to the police. They have to report the death to the Population Information System. The inhabitants are themselves responsible only of notification of changes of residence. Those who move or immigrate are expected to report

to the local register office of the new place of residence on the change of address within one week of the move, specifying all the members of the family or household involved in the move.

Those emigrating should supply a notice of change of address in the country of entry. According to an agreement between the Nordic countries - which are the main destinations of migrants – the population register authorities of the country of entry inform the population register authorities of the country of exit. In the years when municipal elections are arranged (every 4th year), the population is corrected by around 1,000 persons, when emigrants whose emigration has been left unnoticed return notifications of voting.

A reliability survey on the Population Information System is conducted yearly by means of a sample interview (CATI) survey of approx. 10,000 persons. From the EU-SILC point of view, reliability of its address information is of special relevance. In the quality surveys, the final proportion of the correct addresses in the total sample has always been high, 98-99 per cent.

The EU-SILC collects directly from the Population Information System variables PB130, PB140, PB150, PB190, PB210, PB220A and PB220B. None of these information, however, have been checked in the reliability survey.

The Population Information System has no under-coverage in any population groups. Asylum seekers and refugees are not included in the resident population until their permit of residence has been processed. The small over-coverage is a consequence of the necessity to draw the sample in good time before the actual date of defining the sample households (31. Dec.) and may also be related to register updates - delays in the notifications of emigration, moving to reside permanently in institutions or deaths.

A dwelling unit may consist of several households - household is not a register concept – that's why the household composition has to be checked in the interview. The presence of the members of the households are checked in the interview. Persons who recently changed place of residence and/or household, new-borns, recently moved to institutions or died are the usual sources of non-correct register-based pre-entries in the IDS-SILC questionnaire.

2.3.2 Measurement and processing errors

Type of interview

Finland's SILC data is a combination of interviews and register information. In this chapter, the focus is mainly on description of collection and processing of the interviewed data. A short description of the register data processing is provided in chapter 2.3.2.2. The interviews were carried out by CATI or CAPI (table 2.7).

Table 2.7 Type of interview (%), the 2009 cross-sectional survey

	First wave		Second wave		Total	
	N	%	N	%	N	%
CAPI	240	2.37	81	0.8	321	3.17
CATI	5 040	49.72	4 776	47.11	9 816	96.83
Total	5 280	52.09	4 857	47.91	10 137	100.0

2.3.2.1 Measurement errors - questionnaire and register data collection and editing

Description of fieldwork tools, questionnaire build-up, the testing procedures and interviewer training

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List of field work tools of EU-SILC 2009 (income reference period 2008)

1 Questionnaires for CATI/CAPI interviews
1A 2009 panel 1, Finnish/Swedish
1B 2009 panel 2, Finnish/Swedish
1D 2009 panel 3 and 4, Finnish/Swedish

2 Interviewer's instructions
2A Instructions book for all panels, Finnish/Swedish

3 Contact letter
3A Contact letters to the selected persons, first panel, 3 different, Finnish/Swedish
3B Contact letters to the selected persons, second panel, 3 different, Finnish/Swedish
3C Contact letters to the selected persons, third panel, 3 different, Finnish/Swedish

4 Brochures to present the why and how the survey is executed, Finnish/Swedish
5 Pocket Statistics: a small collection of results from previous waves of the SILC survey, specially prepared for the respondents who wanted to know more on how the information is used, Finnish/Swedish
6 The latest news release given by Statistics Finland on income statistics, Finnish/Swedish.
7 List of questions on housing costs; the interviewer may send the list to the respondent to let him find out about the costs in advance before the interview takes place, Finnish/Swedish.

The BLAISE-programmed questionnaire is divided into blocks of questions: a specific block for each household member aged 16+, child care block, health questions block, housing block, a block on household economics, a block on household composition. The order of the blocks is optional: the interviewer can choose the order of blocks. Only the household composition has to be fixed first, after that the interviewer is free to choose the order of the blocks. In case he does not choose blocks himself, the order is automatic.

Questionnaire build-up has its starting point in the previous year's questionnaire, feedback from the field interviewers and feedback from the data editing process and users. The leading principle in the questionnaire build-up is a gradual integration process of the SILC to the IDS, and to avoid too many changes in the national IDS.

The questions for the module 2009 "material deprivation" were inserted in relevant contexts of the core questionnaire, mainly in the housing block. The respondent answering the module was the household respondent.

During the process of BLAISE programming (fall 2008), the questionnaire was table-tested several times by the team responsible for the IDS and EU-SILC. Six persons were involved. In weekly meetings details of the questions were discussed, the focus being the parts of the questionnaire undergoing some change. In the end, a group of professional interviewers checked the questionnaire against their experience. Finally, the technical functioning of the questionnaire was tested in the interviewer organisation before they were sent to the field.

The testing procedure makes use of the BLAISE-programmed questionnaire. The real field situation is simulated by a test sample, actual households from the preceding year's data base. Thus the test questionnaire is pre-filled with the information about the household composition and dates of birth. As in real field situation, the second and consequent panels have more information from previous interview entered into the questionnaires. The testers fill in the questionnaire, again and again, trying all combinations of imagined situations, and likely errors (to disclose signalling), too. They are asked to pay attention to
- spelling, language, formulations and conceptual correctness of the questions,

- proper functioning of the routings and
- adequacy of logical checks, signals and interviewing instructions on the screen.

A major problem with the questionnaire build-up is the testing: a complex routing system, several checks, forced entries and differences between the panel-specific questionnaires risk systematic testing.

Changes in the questionnaire

Changes in doc 65 - operation 2009 having implications to the questionnaire were noted (PL-variables). There was no need to change HS120 - HS150. Questions HS170-HS190 were slightly reformulated and instructions were polished.

PL031 is collected as a starting theme in the labour market questions section: the question(s) on activity is followed by a question on whether the employment was full- or part-time. In 2009 operation. **A new control variable** was implemented in order to restrain the tendency of the respondents to report employment as their current economic status even in cases where the work input is very small. A new question was asked from those who had declared as part-time workers about whether the reported employment implied a weekly work input of at least 15 hours. Persons with less than 15 working hours a week were classified as non-employed (PL031 > 4). This change may have an effect on the distribution of PL031 and other variables depending on it. Of those saying that they were working about three per cent worked less than 15 hours a week, half of them younger than 25 or older than 64 years of age, and half of them classified as students, the others as pensioners, homemakers or 'other'.

Interviewer training

Statistics Finland's interviewer organisation employs about 160 field interviewers on a permanent work contract. They work mostly part-time. They are given basic training on interviewing and questionnaire standards and codes of practices when they start working. They collect most of Statistics Finland's survey data, for the Labour Force Survey, Household Budget Survey, Time Use Survey and Adult Literacy Survey, for example. In other words, they are experienced. Of them 149 were involved with EU-SILC interviews in spring 2009.

The questionnaire changes, especially the module 2009, were introduced to the interviewers in a separate written report and, of course, in the instructions book. The instructions book is rewritten every year and it is also under constant development.

Newly recruited interviewers were trained separately. They had two day's training about the SILC. The training programme included a lecture on the planning of the survey, including a description of Eurostat's process, legislation and future uses of the data, and Eurostat guidelines on data protection. Concern over international comparability was underlined. Instructions on the fundamental rules of central data collection were given and discussed, such as the definition of target population, household definition and its implementation in practice, different concepts and classifications of activity, especially labour market activities, child care questions, housing costs and mortgages. A major part of the training time was used on going through the videoed BLAISE questionnaire with the aid of three lecturers. The panel design and the future modules were described. The last part of training consisted of data transferring, data protection and other practicalities.

During the whole fieldwork period, **interviewers' information desk is open** for them. They can ask for support from the IDS-SILC team. The interviewers, who are distributed all over the country, also have organised district meetings with each other to discuss professional matters.

Possible sources of measurement errors

Measurement errors are stemming from:
- difficulties in understanding complex questions on the telephone,
- difficulties in remembering complex life course events like the year's activities, day care changes, payments of many sorts, and
- difficulties in knowing/reporting another household member's activities are not systematically surveyed, but the questionnaire was also evaluated in the Cognitive Laboratory from the above-mentioned points of view in 2004. On the basis of observations made, the questionnaire was partly re-built in 2005. In 2006 - 2009, no major substantial changes were made in the questionnaire.

The potentials for error prevention have been used extensively in BLAISE programming.
- Most relevant question-specific instructions are on the screen with the questions.
- Routings to avoid repetitive or irrelevant questions.
- Pre-fillings from the Population Register and the previous interview are used to help household construction.
- Coherence is maintained by introducing logical checks to interconnected questions.
- Questions presuming numerical answers are given upper and lower limits where possible.
- Signals are pre-programmed to possible incoherent answers, to violations of numerical limits or to missing answers.
- The questionnaire is programmed to accommodate the mode of addressing the respondent depending on whether the selected person him/herself or another member of the household is responding (interviewing the selected respondent about himself: Did you…; interviewing through a proxy respondent: Did N.N. …). This helps the interviewer and respondent to keep control of the member-specific data collection.

Of the many possible sources of measurement errors, the focus in this section is on **errors due to integration problems, questionnaire techniques and fieldwork problems.** The problems are presented here as possible sources of error. The exact nature, size and consequences of error, if any, can only rarely be detected.

Proxy interviews

In Finland, the EU-SILC is designed on the selected respondent -model. Typically, only one person is interviewed. As a rule, this interviewee should be the selected person. He/she gives all the information: the household questionnaire and the personal questionnaires of the selected person and the other members of the household.

In the EU-SILC, it is important to interview selected respondents about their subjective evaluations. The selected respondent (especially the youngest selected respondents who still live with their parents, or very old respondents) may not be aware of the household economy, household debts, child care, housing items, the other household members' activities, or many other items. The interviewers have been instructed to negotiate with the selected respondent and prefer interviewing him if he is able to give all the information. Otherwise, a household respondent is chosen by the interviewer.

Interviewing more than one household member – both the selected person and a household respondent – is supported, but it rarely happens. Other members are allowed to be consulted during the interview if they are available. This option is often used. In 1602 interviews (16 % of all) a second person was at least consulted during the interview.

The interviewers have traditionally been trained to find a household respondent in the earlier years when collecting the IDS data and they have been continuing this procedure. According to an estimate of the interviewers, about 85 per cent of their informants are those who have the best knowledge of the household's affairs. In case the selected person is aged less than 18 years, the contact letter is also sent to his/her parents or guardians. In 2009, 97 per cent of the selected respondents under the age of 18 have been represented by a proxy respondent (table 2.9).

Problems arising from the use of proxy respondents concentrate on the subjective questions: the control in terms of which household member answers the questions involving subjective assessments, depends on the interviewer. Use of proxy is denied only in the self-reported health questions (PH010-PH030). On the other hand, the selected respondent may be utterly unaware of the household economy and other members' activities. This is the case especially with the youngest respondents.

In table 2.8, a proxy respondent is defined as the respondent who is not the selected respondent. In 80 per cent of the households, the selected respondent was interviewed. Of the 10,137 selected respondents in the cross-section, **18 per cent were represented by a proxy** (table 2.8). The rate has been slowly decreasing through years: it was 25 per cent in 2004, 24 in 2005, 21 in 2006, 22 in 2007 and 20 in 2008.

On the other hand, of all the other 9 969 household members aged 16 or older (who were not selected persons), 82 per cent were represented by a proxy, who was the selected person in three cases out of four.

Table 2.8 Use of proxy respondents

Informant	Information on:					
	Selected person		Co-resident		Total	
	N	%	N	%	N	%
The person him/herself	8 359	82.5	1 778	17.8	10 137	50.4
Proxy	1 778	17.5	8 191	82.2	9 969	49.6
Total	10 137	100.0	9 969	100.0	20 106	100.0

The high percentage of proxy interviews guarantees a higher quality of the household information. Most of the proxy respondents are parents or spouses (table 2.9). Proxies are mostly (89 %) 1st or 2nd persons responsible for the accommodation, which also indicates their competence regarding knowledge of the household affairs.

Table 2.9 Distribution of proxy interviews by their relationship to the selected person in age groups

Age of the selected resp.	Selected respondent	The informant						Total
		Proxy						
		Spouse	Child	Parent	Sibling	Other	All	
16-17	28	0	0	229	0	1	230	258
18-24	660	33	0	293	1	3	330	990
25-44	2 613	323	2	38	3	0	366	2 979
45-64	3 537	519	1	10	6	2	538	4 075
65+	1 521	269	34	0	4	7	314	1 835
Total	8 359	1 144	37	570	14	13	1 778	10 137

Fieldwork problems

Mode of data collection (CATI). According to interviewers' estimate, about half of the interviews are conducted through mobile phones. In about 6 per cent of those interviews take place outside the respondent's home. Telephone interviews are afflicted by a sense of rush. In large households, the interview is too long for telephone. The interviewers are allowed to change the mode into CAPI, in case the respondent has no phone or has an exceptionally large household. CAPI mode was used in 321 households, that is 3 per cent of all households in the 2009 cross-section.

According to the Interviewers' Feedback Survey 2009, 40 per cent of the interviewers felt that the duration of the interview was too long and half of those who felt so also thought that it had an effect on the refusal rate and weakened the quality of responses.

Refusals. The share of sampled households who refuse co-operation with the interviewer slowly rises each year. In 2009 operation, the share of refusals was 70 per cent of the total non-response of 2381 (of the total sample of 13,004 that were gone after).

Fieldwork tools. According to the feedback from the interviewers, the 2009 questionnaire was easier to manage than the previous year's questionnaire. Percentage of interviewers who felt that the questionnaire functioned technically badly fell from 20 per cent in 2005 to 5 in 2009. Percentage of interviewers who felt that the questionnaire functioned badly as to the substance, fell from 26 per cent in 2005 to 5 in 2009.

Problems of integration of the national IDS and EU-SILC

A major part of the 2009 cross-sectional questionnaire contents was shared with the national IDS and EU-SILC. A serious concern in the integration process is to preserve the national time-series without violating demands made to EU-SILC comparability. A stepwise integration strategy aims to achieve full integration in 2010. The questionnaire for the sixth survey year of the EU-SILC operation was modified slightly.

Labour information in IDS and EU-SILC

In the IDS, the reference period for the labour information is the income reference year. In the SILC, labour information refers mainly to the current situation. Different reference periods in IDS and SILC concern variables PL031, PL040, PL050, PL111, PL130, PL140 and PL150. SILC variables PL073 - PL090 are also in contradiction with similar IDS monthly activities variables: in the IDS overlapping activities are permitted, in the SILC, one should define one's main activity for each month. Different reference periods would make it very hard for the interviewee and the interviewer to give accurate information, especially in cases where changes happened during the IRP or currently. To make the fieldwork easier, the reference periods were reduced by defining 'current' as the December of the IRP.

2.10 Examples of labour information with different requirements in the IDS and EU-SILC

Concepts / Variables	Requirements		Solution
	IDS	EU-SILC	Integrated
			Current = December of the IRP
Main job	Longest period of employment during the year or highest income	Current	If main job is different from current job, both are collected
Second job	The second longest period of employment during the year or second highest income	Current	If second job is different from current second job, both are collected
PL020	---	Current - 4 weeks	December
PL025	---	Current + 2 weeks	December
PL031	---	Current	December
PL040	Status in main job	Current	If main job is different from current job, both are collected
PL050	Occupation in main job	Current	If main job is different from current job, both are collected
PL073, PL074, PL075, PL076, PL080, PL085, PL086, PL087, PL088, PL089, PL090	Number of months for each activity - 12 categories - overlaps allowed	Number of months for each main activity - no overlaps allowed	Number of months and calendar of activities collected for all members 16+
PL111	NACE in main job	Current	If main job is different from current job, both are collected
PL140	Contract in main job	Current	If main job is different from current job, both are collected

From the very start of the EU-SILC, **the reference periods were integrated**. "Current" is operationalized as the December of the IRP.

Data editing due to inconsistencies between interview and registers

Starting from the 2009 operation, months of activities (PL073-PL090) and the self-defined economic status (PL031) are edited using register data, especially income data. Registered salaries and wages are compared to the questionnaire data on employment and jobs, and the in the same way self-employment income, unemployment benefits, family benefits, etc.- do tell about the activities of the respondents. In the editing, as a rule the tax register is deemed as more reliable, especially considering that the proxy respondents perhaps are not always aware of their co-residents' activities.

In the data processing phase working-age persons receiving disability pension (and no other pensions) who had defined themselves as 'retired' are moved to the 'permanently disabled'. This editing is based on register information on pensions.

Variable-specific problems

HS130 Lowest monthly income to make ends meet. The difficulty of this question for the respondent is well illustrated by the high level of item non-response in the cross-section data. Very low and very high figures were also given. According to the interviewer's code of action questions of opinion should not be helped. The question can only be repeated. The wording of the question is essential. The wording was reformulated in the Survey laboratory for the 2006 operation but the high level of non-response prevails.

PL060, PL100 Number of hours usually worked per week in main job, Total number of hours in second, third…jobs. Item non-response is rather high here, obviously, due to proxy respondents' inability to report the hours accurately. The missing values were imputed (hot deck) using modified 2-digit level of ISCO classification, separately by gender and crude age, information on whether the job was the main or second job and whether it was a part-time job. Imputation was executed first time in the 2008 operation. In 2009, there were 568 imputed records in PL060 and 100 in PL100.

Measurement failures due to questionnaire techniques

HB100, PB120 - Household and personal interview duration - In Finland's selected respondent model, the duration of the interview is measured as the duration for both household- and personal interview in variable HB100. Variable PB120 is empty.

PE030 Year when the highest level of education was attained - a large number of missing values due to register imperfection.

PL040 Status in employment, PL050 Occupation, PL140 Type of contract, PL 150 Managerial position: a considerable item non-response still prevails for persons who were currently inactive.

2.3.2.2 Possible sources of processing errors

Process description

Fieldwork management and data reception. The interviewers collect the data and transmit them to the central unit. At Statistics Finland, there is a separate organisation, the interviewers' central unit, to control, monitor and supervise the fieldwork. The central unit transmits the fieldwork tools to the field and organises interviewer training at the beginning of the project, follows the fieldwork progress, and receives the output from the field, checks that all the sampled units are adequately processed and transmits the data to the IDS-SILC team. It

also collects feedback from the interviewers with a standardised questionnaire. All data contents are processed by the IDS-SILC team either using the BLAISE system or SAS. Mainly the IDS and SILC data processing is integrated.

Checking and editing of the interview data. The BLAISE programming system already described above is a major data entry controller. However, there is still much processing to be done in the central unit. Missing identification codes are found out with the help of the Population Information System and added to the database. The checking process starts with the interviewers' remarks saved on the questionnaires. They comment whenever they feel that the coded answer does not reflect correctly the individual's real world. All comments are read and the need to edit the data is evaluated. This work is started usually in mid-February. All comments were processed before the end of June.

After the fieldwork period, the IDS-SILC team looks through incomplete interviews and makes a decision on the acceptance. Some of the received incomplete interviews are rejected. Since the register income data are nearly perfect, the acceptance decision is based on the sufficiency of the labour activities and housing information. In the 2008 operation, 13 interviews were excluded from the received sample as incomplete.

Next, checking against the register data is started as soon as the relevant register information is available. Occupation and NACE are processed through automatic coding. Some of the cases will remain open, and they are processed manually.

Activity months, occupation, NACE, housing costs and child care are checked against other information with special intensity. The checks include error lists generated by comparisons of interview and register data. Statistics Finland has access to administrative data on an individual level, which makes this data process especially useful. Great differences between different sources of information, if detected, are processed one by one. All variables, except variables where opinions are expressed, are checked: missing answers, denials and don't knows are checked against other information. Clear mistakes are corrected. Missing values are completed whenever possible (e.g. missing dwelling rents are corrected with average rents per m^2 in the area, other missing housing cost information is completed with supporting information collected on the questionnaire). Illogical answers are straightened if possible. Outliers (considerably small or high values in numerical variables, e.g. inter-household transfers, housing costs) are detected and checked against other information.

Processing inconsistency in the integrated project 2004-2008. The 12 IDS variables on months of activity are heavily edited to comply with register data, especially with income data. That can be done, since in the IDS there are not too many connections between months of activity and other interviewed variables. As a result, some of the respondents' own answers are rejected and replaced with answers in coherence with their earnings.

In 2004-2008 operations, the above described editing has not been executed on the SILC variables concerning categories of activity or inactivity, since that would destroy the coherence of the large set of other interviewed variables interconnected with activities. In other words, as a result of different editing, activity information in the IDS and SILC differs from each other. Months of activity (PL070, PL072, PL080, PL085, PL087, PL090) in the EU-SILC are, thus, subjective responses given by respondents, as defined in the EU-SILC document 065.

However, a project was started in 2008 to review the possibilities to harmonise the SILC activity data with the register-edited activity data. As a result, an editing procedure was planned and put into action from the 2009 operation on.

Database construction. Simultaneously with the checking process, a database is opened and variable formation begins. SAS-programming is used. Interview-based and register-based variables construction is started. Interview-based variables are transferred from the questionnaires to the database. Variables that need constructing – i.e. combined interview- and register information and complex questionnaire items – are added

one by one into the database after all the checks have been made. Imputations are carried out. The SILC data files for Eurostat are compiled into separate database tables in the same pace with the IDS data.

Processing register data. Register data - that have been subscribed from the register authorities with a special procedure - arrive in electronic form to the Statistics Finland's data processing unit. In 2009, use was made of eleven registers. The incoming data are checked technically and substantially. Possible defects are notified to the authority in charge. They then transmit the corrected data. The registers cover all units - population, dwelling units, income receivers, etc. The data are linked to the sample persons and transmitted into the database of the IDS-SILC. The data are compared with available external data, i.e. those of the tax authority, pensions authority and other statistics. In this phase, the data are in their elementary form. Imputations are made using the hot-deck method (interest income) or modelling (imputed rent). The cross-sectional SILC target variables are constructed only after their elements have been checked.

Comparison of aggregates. Routines have been developed to compare the results on variable level with external sources such as the Labour Force Survey, National Accounts, wage statistics and statistics on different social transfers and taxation produced by the National Pensions Institute, National Board of Taxes and National Research and Development Centre for Welfare and Health. Standard comparisons are routinely made each year. These comparisons also have an effect on error detection.

2.3.3 Non-response errors

2.3.3.1 Achieved sample size

Table 2.11 Achieved sample size according to rotational groups (DB075)

		Number of households for which an interview was accepted for the database (DB135=1) .	Number of persons aged 16 or older, members of the households for which the interview was accepted for the database (DB135=1) and for whom interview was completed (RB250=11 to 13).	Number of selected respondents, members of the households for which the interview was accepted for the database (DB135=1) and who completed a personal interview (RB250=11 to 13).
Cross-sectional, total:		10 137	20 106	10 137
New replications (DB075= 4,5)		5 280	10 459	5 280
Old replications (DB075= 3,6)		4 857	9 647	4 857
DB075	Wave			
3	2	1 589	3 148	1 589
4	1	1 757	3 486	1 757
5	1	3 523	6 973	3 523
6	2	3 268	6 499	3 268

2.3.3.2 Unit non-response

Table 2.12 Response rates (%) for the new replications

		Household non-response rate	Individual non-response rate			Overall individual non-response rate		
			Selected respondent	All individuals 16 or older	Non selected respondent	Selected respondent	All individuals 16 or older	Non selected respondent
Cross-sectional, total:		20.77	0.00	0.00	0.00	20.77	20.77	20.77
New replications (DB075= 4,5)		**28.30**	**0.00**	**0.00**	**0.00**	**28.30**	**28.30**	**28.30**
Old replications (DB075= 3,6)		10.55	0.00	0.00	0.00	10.55	10.55	10.55
DB075	Wave							
3	2	12.31	0.00	0.00	0.00	12.31	12.31	12.31
4	**1**	**28.46**	**0.00**	**0.00**	**0.00**	**28.46**	**28.46**	**28.46**
5	**1**	**28.22**	**0.00**	**0.00**	**0.00**	**28.22**	**28.22**	**28.22**
6	2	9.67	0.00	0.00	0.00	9.67	9.67	9.67

The follow-up ratio is the same as the follow-up rate due to the non-existent new households.

2.3.3.3 Distribution of households (original units) by 'record of contact at address' (DB120), by 'household questionnaire result' (DB130), and by 'household interview acceptance' (DB135), for each rotational group (if applicable) and for the total

Table 2.13 Distribution of households by DB120, of households contacted by DB130 and DB135

Description	Total		Wave 1		Wave 2		DB075=3 Wave 2		DB075=4 Wave 1		DB075=5 Wave 1		DB075=6 Wave 2	
	number	%	number	%	number	%	number	%	number	%	number	%	number	%
Total	12 984	100.0	7 500	100.0	5 484	100.0	1 829	100.0	2 500	100.0	5 000	100.0	3 655	100.0
Address contacted	12 794	98.5	7 364	98.2	5 430	99.0	1 812	99.1	2 456	98.2	4 908	98.2	3 618	99.0
Address non-contacted	190	1.5	136	1.8	54	1.0	17	0.9	44	1.8	92	1.8	37	1.0
Total address non-contacted	190	100.0	136	100.0	54	100.0	17	100.0	44	100.0	92	100.0	37	100.0
Address cannot be located	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Address unable to access	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Address does not exist, etc.	190	100.0	136	100.0	54	100.0	17	100.0	44	100.0	92	100.0	37	100.0
Description	Total		Wave 1		Wave 2		DB075=3 Wave 2		DB075=4 Wave 1		DB075=5 Wave 1		DB075=6 Wave 2	
	number	%	number	%	number	%	number	%	number	%	number	%	number	%
Total	12 794	100.0	7 364	100.0	5 430	100.0	1 812	100.0	2 456	100.0	4 908	100.0	3 618	100.0
Household questionnaire completed	10 166	79.5	5 303	72.0	4 863	89.6	1 590	87.7	1 770	72.1	3 533	72.0	3 273	90.5
Interview not completed	2 628	20.5	2 061	28.0	567	10.4	222	12.3	686	27.9	1 375	28.0	345	9.5
Total interview not completed	2 628	100.0	2 061	100.0	567	100.0	222	100.0	686	100.0	1 375	100.0	345	100.0
Refusal to co-operate	1 652	62.9	1 244	60.4	408	72.0	171	77.0	409	59.6	835	60.7	237	68.7
Entire household temporarily away for duration of fieldwork	55	2.1	31	1.5	24	4.2	9	4.1	13	1.9	18	1.3	15	4.3
Household unable to respond	181	6.9	147	7.1	34	6.0	14	6.3	46	6.7	101	7.3	20	5.8
Other reasons	740	28.2	639	31.0	101	17.8	28	12.6	218	31.8	421	30.6	73	21.2
Household questionnaire completed	10 166	100.0	5 303	100.0	4 863	100.0	1 590	100.0	1 770	100.0	3 533	100.0	3 273	100.0
Interview accepted for database	10 137	99.7	5 280	99.6	4 857	99.9	1 589	99.9	1 757	99.3	3 523	99.7	3 268	99.9
Interview rejected	29	0.3	23	0.4	6	0.1	1	0.1	13	0.7	10	0.3	5	0.2

2.3.3.4 Distribution of substituted units

The Finnish IDS and SILC data contain no substitutions.

2.3.3.5 Item non-response

Almost all income is from registers, and item non-responses do not affect them. One major item (interest income taxed at source) collected by interviewing causes item non-responses to variable HY090G which have been imputed. Total income variables HY010 and HY020 are constructed from collected gross income components and they include non-responses due to HY090G only. Other gross income components with the imputation factor values are HY022 and HY023, which are constructed by gross/net conversion of gross income components on the basis of taxation register at the observation unit level (imputing). Also components of PY020N, PY021N, PY030G, HY030G, HY100N not included in the total household income, but in the separate income variables of the data have been marked by imputation factors. For calculating distributions of item non-responses, all register gross income components with imputation factor values have been considered.

Imputation factors are to the persons/households that have received the income. Thus, information about income exclusion (i.e. taxes paid (e.g. from non-cash employee income except a company car, the difference PY020G-PY021G) from the initial component HY140G by imputing) is not available in the income flags or item non-response rates, but in the PY020N and PY021N income flags.

Total household income according to the more complete definition includes HY030G for which all values have been imputed. From this follows that the number of households with item non-responses in the total income variables is markedly higher than in the ones according to the definitions used from the beginning of the survey (from the sy2004 onwards).

Table 2.14 Distribution of item non-response of the cross-sectional survey, households and persons aged 16 or older, %

Income component	% of households having received an amount (<0, >0)	% of households with missing values (before imputation)	% of households with partial information (before imputation)	% of households with collected values (before imputation) of the households having received the income	% of households with partial information (before imputation) of the households having received the income
HY010	100.0	10.8	10.8	89.2	10.8
HY020	100.0	10.5	10.5	89.5	10.5
HY022	98.4	96.9	96.9	0.0	100.0
HY023	97.0	90.2	90.2	0.0	100.0
HY030G	82.9	82.9	82.9	0.0	100.0
HY040G	10.0	0.0	0.0	100.0	0.0
HY050G	31.4	0.0	0.0	100.0	0.0
HY060G	5.7	0.0	0.0	100.0	0.0
HY070G	15.8	0.0	0.0	100.0	0.0
HY080G	8.8	0.0	0.0	100.0	0.0
HY090G	80.1	26.5	26.5	66.9	33.1
HY100G	38.7	0.0	0.0	100.0	0.0
HY110G	3.3	0.0	0.0	100.0	0.0
HY120G	57.9	0.0	0.0	100.0	0.0
HY130G	19.9	0.0	0.0	100.0	0.0
HY140G	98.6	0.0	0.0	100.0	0.0
HY135G	..	..	..	..	..
HY145G	..	..	..	..	..
HY100N	38.7	38.7	38.7	0.0	100.0
Income component	% of persons 16+ having received the amount (<0, >0)	% of persons 16+ with missing values (before imputation)	% of persons 16+ with partial information (before imputation)	% of persons 16+ with collected values (before imputation) of the persons 16+ having received the income	% of persons 16+ with partial information (before imputation) of the persons 16+ having received the income
PY010G	65.3	0.0	0.0	100.0	0.0
PY020G	15.6	0.0	0.0	100.0	0.0
PY021G	2.3	0.0	0.0	100.0	0.0
PY030G	64.6	64.6	64.6	0.0	100.0
PY035G	13.5	0.0	0.0	100.0	0.0
PY050G	18.6	0.0	0.0	100.0	0.0
PY070G	..	..	..	..	..
PY080G	5.0	0.0	0.0	100.0	0.0
PY090G	11.8	0.0	0.0	100.0	0.0
PY100G	18.6	0.0	0.0	100.0	0.0
PY110G	1.0	0.0	0.0	100.0	0.0
PY120G	6.2	0.0	0.0	100.0	0.0
PY130G	8.1	0.0	0.0	100.0	0.0
PY140G	9.7	0.0	0.0	100.0	0.0
PY200G	..	..	..	..	..
PY020N	15.6	15.6	15.6	0.0	100.0
PY021N	2.3	2.3	2.3	0.0	100.0
PY080N	5.0	5.0	5.0	0.0	100.0

2.3.3.6 Total item non-response and number of observation in the sample at unit level of the common cross-sectional European Union indicators, for equivalised disposable income

Sample observations not taken into account due to item non-response for the indicators by required sub groups do not exist. The number of sample observations exceeds the required minimum number criterion by the classes of these variables, i.e. 49 sample observations.

2.4 Mode of data collection

Table 2.15 Distribution of household members aged 16 and over by 'RB250' and 'RB245'

Rotational group	Total	RB250=11	RB250=12	RB250=13	RB250=21	RB250=22	RB250=23	RB250=31	RB250=32	RB250=33
Household members 16+ and RB245 = 1 to 3										
Total	20 106	0.0	0.0	20 106	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Wave 1	10 459	0.0	0.0	10 459	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Wave 2	9 647	0.0	0.0	9 647	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
DB075 = 3 Wave 2	3 148	0.0	0.0	3 148	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
DB075 = 4 Wave 1	3 486	0.0	0.0	3 486	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
IDB075 = 5 Wave 1	6 973	0.0	0.0	6 973	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
DB075 = 6 Wave 2	6 499	0.0	0.0	6 499	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Household members 16+ and RB245 = 2										
Total	10 137	0.0	0.0	10 137	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Wave 1	5 280	0.0	0.0	5 280	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Wave 2	4 857	0.0	0.0	4 857	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
DB075 = 3 Wave 2	1 589	0.0	0.0	1 589	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
DB075 = 4 Wave 1	1 757	0.0	0.0	1 757	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
IDB075 = 5 Wave 1	3 523	0.0	0.0	3 523	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
DB075 = 6 Wave 2	3 268	0.0	0.0	3 268	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Household members 16+ and RB245 = 3										
Total	9 969	0.0	0.0	9 969	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Wave 1	5 179	0.0	0.0	5 179	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Wave 2	4 790	0.0	0.0	4 790	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
DB075 = 3 Wave 2	1 559	0.0	0.0	1 559	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
DB075 = 4 Wave 1	1 729	0.0	0.0	1 729	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
IDB075 = 5 Wave 1	3 450	0.0	0.0	3 450	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
DB075 = 6 Wave 2	3 231	0.0	0.0	3 231	0.0	0.0	0.0	0.0	0.0	0.0
	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 2.16 Distribution of household members aged 16 and over by 'RB260' and 'RB245'

Rotational group	Total	RB260=1	RB260=2	RB260=3	RB260=4	RB260=5	RB260= missing
Household members 16+ and RB245 = 1 to 3 and RB250 = 11 or 13							
Total	20 106	0.0	403	11 126	0.0	8 577	0.0
	100.0	0.0	2.0	55.3	0.0	42.7	0.0
Wave 1	10 459	0.0	304	5 716	0.0	4 439	0.0
	100.0	0.0	2.9	54.7	0.0	42.4	0.0
Wave 2	9 647	0.0	99	5 410	0.0	4 138	0.0
	100.0	0.0	1.0	56.1	0.0	42.9	0.0
DB075 = 3 Wave 2	3 148	0.0	21	1 769	0.0	1 358	0.0
	100.0	0.0	0.7	56.2	0.0	43.1	0.0
DB075 = 4 Wave 1	3 486	0.0	90	1 916	0.0	1 480	0.0
	100.0	0.0	2.6	55.0	0.0	42.5	0.0
IDB075 = 5 Wave 1	6 973	0.0	214	3 800	0.0	2 959	0.0
	100.0	0.0	3.1	54.5	0.0	42.4	0.0
DB075 = 6 Wave 2	6 499	0.0	78	3 641	0.0	2 780	0.0
	100.0	0.0	1.2	56.0	0.0	42.8	0.0
Household members 16+ and RB245 = 2 and RB250 = 11 or 13							
Total	10 137	0.0	300	8 823	0.0	1 014	0.0
	100.0	0.0	3.0	87.0	0.0	10.0	0.0
Wave 1	5 280	0.0	226	4 548	0.0	506	0.0
	100.0	0.0	4.3	86.1	0.0	9.6	0.0
Wave 2	4 857	0.0	74	4 275	0.0	508	0.0
	100.0	0.0	1.5	88.0	0.0	10.5	0.0
DB075 = 3 Wave 2	1 589	0.0	16	1 419	0.0	154	0.0
	100.0	0.0	1.0	89.3	0.0	9.7	0.0
DB075 = 4 Wave 1	1 757	0.0	69	1 534	0.0	154	0.0
	100.0	0.0	3.9	87.3	0.0	8.8	0.0
IDB075 = 5 Wave 1	3 523	0.0	157	3 014	0.0	352	0.0
	100.0	0.0	4.5	85.6	0.0	10.0	0.0
DB075 = 6 Wave 2	3 268	0.0	58	2 856	0.0	354	0.0
	100.0	0.0	1.8	87.4	0.0	10.8	0.0
Household members 16+ and RB245 = 3 and RB250 = 11 or 13							
Total	9 969	0.0	103	2 303	0.0	7 563	0.0
	100.0	0.0	1.0	23.1	0.0	75.9	0.0
Wave 1	5 179	0.0	78	1 168	0.0	3 933	0.0
	100.0	0.0	1.5	22.6	0.0	75.9	0.0
Wave 2	4 790	0.0	25	1 135	0.0	3 630	0.0
	100.0	0.0	0.5	23.7	0.0	75.8	0.0
DB075 = 3 Wave 2	1 559	0.0	5	350	0.0	1 204	0.0
	100.0	0.0	0.3	22.5	0.0	77.2	0.0
DB075 = 4 Wave 1	1 729	0.0	21	382	0.0	1 326	0.0
	100.0	0.0	1.2	22.1	0.0	76.7	0.0
IDB075 = 5 Wave 1	3 450	0.0	57	786	0.0	2 607	0.0
	100.0	0.0	1.7	22.8	0.0	75.6	0.0
DB075 = 6 Wave 2	3 231	0.0	20	785	0.0	2 426	0.0
	100.0	0.0	0.6	24.3	0.0	75.1	0.0

2.5 Interview duration

HB100, PB120, Duration of the household and personal interviews are not measured separately. In a design using a sample of persons, typically only one person in a household is interviewed, responding to the household questionnaire and also to all personal questionnaires. The mean interview duration per household is calculated simply as the mean of all overall durations.

The mean overall interview duration was 29 minutes in the 2009 cross-sectional survey. In the group with duration exceeding one hour's time (230), the mean was 75 minutes and the maximum was 90 minutes.

Table 2.17 Distribution of total duration of interview in cross-section by rotational group

		1-25	26-35	36-60	61-		Total		Mean
Cross-section, total	n	4 770	3 073	2 055	230	9	10 137		28.6
		47.1	30.3	20.3	2.3	0.1	100.0		
4, 5 (Wave 1)	n	2 168	1 714	1 258	134	6	5 280		30.0
%		41.1	32.5	23.8	2.5	0.1	100.0		
3, 6 (Wave 2)	n	2 602	1 359	797	96	3	4 857		27.1
%		53.6	28.0	16.4	2.0	0.1	100.0		
3 (Wave 2)	n	806	446	301	35	1	1 589		28.0
%		50.7	28.1	18.9	2.2	0.1	100.0		
4 (Wave 1)	n	655	585	464	51	2	1 757		31.1
%		37.3	33.3	26.4	2.9	0.1	100.0		
5 (Wave 1)	n	1 513	1 129	794	83	4	3 523		29.5
%		43.0	32.1	22.5	2.4	0.1	100.0		
6 (Wave 2)	n	1 796	913	496	61	2	3 268		26.7
%		55.0	27.9	15.2	1.9	0.1	100.0		

3 Comparability

3.1 Basic concepts and definitions

Basic concepts and their definitions are in accordance with the Commission Regulation (EC) No 1980/2003 provided for the community statistics on income and living conditions as regards definitions and updated definitions. To some extent, adaptation of the definitions used in the national statistical system is allowed for the EU-SILC. In Finland, private household and household membership in particular are the ones that have been defined nationally (e.g. IDS) with less detailed information (i.e. time duration for temporarily absence in private accommodation) than stated in the regulations, but within the framework.

The reference population consists of the members of the private households permanently resident (usually resident: the census definition) in Finland on 31 December 2008. For migrants in particular, permanently residence means that they have resided or intend to reside for at least 12 months and they have not permanent residence abroad. Persons living in institutions, in collective households or in residential homes[1] have been excluded.

The private household was constructed to include a person residing alone, or all the persons, related or not, who reside and have their meals together or otherwise use their income together. The definition equals with the obliged EU-SILC definition on shares in household expenses, but uses other words "use income together" in the interview.

If a person was temporarily absent from the household's main dwelling and from home no specific time duration was set for the absence provided that the above-mentioned criteria of household formation and membership (shares in household expenses) were fulfilled. Such persons have close family ties to the household and they do not form a household of their own. Therefore, the following persons are also counted in household members:

- Persons conducting military service or conscript service
- Persons residing and working in another locality or abroad if they are involved in the acquisition and use of household income
- Persons residing and studying in another locality if they use income received mostly from their parents
- Persons temporarily in institutions, on holiday or travelling.

The following persons form a household of their own:
- Subtenants
- Domestic staff
- Students living on their own if they live mostly on their own income or on a student loan
- Students residing in dormitories, unless they are married or officially cohabiting.

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[1] Residential homes are situated either in residential or institutional care buildings and do not meet the definition of dwelling. They do not include a kitchen or cooking facilities, a water closet or cleaning facilities (shower, bathroom or sauna). Students dormitories which are counted in the private household definition above include these facilities.

The permanently resident population that was not included in private households refers to the difference between the number of total population and the private household persons permanently resident in Finland on 31 December. The number of total population was 5,326,314 from which about 2.0 per cent was not in the private households, but was permanently institutionalised or living in collective households or residential homes. The number of estimated private household population was 5,247,446.

Other definitional solutions done are due to the collection of the information both from registers and by interviews. These are related to **reference times**. First, current as a reference time refers to several calendar time points. Information collected solely by interviews (e.g. non-monetary deprivation indicators, education, health) refers to the interview time point in the survey year (2009). Information collected by interviews, but used for the target variables as combined with the information from registers and other information interviewed on themes close to income is related to the income reference period, which is the fixed 12-month period before the survey year, i.e. the whole calendar year (2008). Then, the current is either the last day (dwelling, characteristics of dwelling for the imputed rent, housing environment) or the last month (economic activity, housing costs) of the income reference year. In particular, information on housing arrears is consistent with information on housing costs from the income reference period, not from the last twelve months preceding the interview time point as provided.

Finland's definitions for the reference periods in the EU-SILC 2009 survey.

Current, time point of interview for the respondent in the survey year 2009:
- Non-monetary household deprivation indicators
- Housing (amenities in the dwelling)
- Education
- Health

Current, last day (31 Dec.) of the income reference period (2008):
- Basic data
- Physical and social environment
- Housing (dwelling type, tenure status and housing conditions)

 Current, last month (December) of the income reference period (2008):
- Child care
- Labour information on current activity status and current main job,
   including information on last main job for unemployed,
- Detailed labour information
- Housing costs (a part of housing costs)

Last 12 months preceding the time point of interview:
- Health (access to health care)

Income reference period (a fixed 12-month period), i.e. 2008:
- Income
- Labour information on activity status during income reference year
- Housing and non-housing related arrears
- Housing costs (a part of housing costs, e.g. income related items)

The income reference period is the preceding calendar year of the survey year, i.e. a fixed 12-month period. Income taxed by the Bookkeeping Act received from the completed accounting periods in the income reference period is included. These are business income, income from dividends and interests.

The reference period for taxes on income and social contributions is the years when taxes are paid from the income received during the income reference period. The taxes are paid in the income reference period (t) and the following years (t+1, t+2). The social contributions are mostly paid in the income reference period (t).[2]

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[2] Most of the taxes (incl. taxes on net wealth owned) and social contributions are actually done during the income reference year (t) as withholdings by a payer or advance payments by a person, nearly 90 per cent of enforced taxes in general (Statistics of National Board of Taxes 2009). According to occupational status, the consistency of income and tax year is highest among employees and pensioners, whereas it is not as high among self-employed persons and farmers. Some of the tax payments can be done up till March of the year after the income year (t+1). As a result of the enforced taxation by tax authorities, a small part of the enforced taxes are received as tax refunds in the year after the income reference

The reference period of taxes on wealth (i.e. real estate tax from 2006 onwards) is the year when taxes are paid from the real estate owned in the beginning of the tax year, i.e. the income reference period (2008)**.** Taxable value refers to the value of the previous year (2007), from which it's building part has been raised up to a replacement value by the building cost index. The tax percent of the tax year (2008) is determined by the municipality where the real estate locates. The payments are done during the income reference year.

The time lag between the income reference period and current variables is in its maximum when current information is from the interview time point. The last interview was conducted on 29 May in the survey year. The time lag is then **4.9 months**. However, most of the current information is from the end of the income reference period and then the time lag does not exist.

Interviews were conducted from 7 January to 29 May in the survey year 2009. **The duration of interviewed data collection** was **4.7 months**. Of all household interviews, 25 per cent were collected by 4 February, 50 per cent by 24 February, 75 per cent were collected by 1 April, and 90 per cent by 5 May.

For the register database, the last information was collected on 4 December in the survey year 2009. When data collection from registers is included in the measurement, **the duration of the whole data collection both from interviews and registers was 11.0 months.**[3]

The basic information on activity status during the income reference period was interviewed from the household respondent. The information is primarily based on the respondent's perception about his/her and household members' activities during the income reference period. Received answers were further checked and edited against register information to be correct.

The target variables on a person's activity status during the income reference period and the detailed subgroups interviewed are as follows:
PL073, Number of months at full-time work as employee:
- Employee working full-time (self-defined or at least 30 hours per week, incl. persons in paid maternity, paternity, parental or sick leave)
PL074, Number of months at part-time work as employee:
- Employee working part-time (self-defined or under 30 hours per week, incl. persons in paid maternity, paternity, parental or sick leave)
PL075, Number of months at full-time work as self-employed:
- Self-employed working full-time (self-defined or at least 30 hours per week, incl. family workers)
PL076, Number of months at part-time work as self-employed:
- Self-employed working part-time (self-defined or under 30 hours per week, incl. family workers)
PL080, Number of months as unemployed:
- Unemployment , layoffs
PL085, Number of months in retirement or early retirement:
- In old-age or early-old age pension, in unemployment pension if not a unemployed (PL080)
PL086, Number of months as disabled or/and unfit to work:
- In unpaid sickness leave, in disability pension
PL087, Number of months in studying:
- Full-time pupil, student, in further training and other unpaid work experience
PL088, Number of months in compulsory military service:
PL089, Number of months fulfilling domestic task and care responsibilities:
PL090, Number of months in other inactivity

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period (t+1), and a part of the enforced taxes are paid as residual taxes in the year after the income reference period (t+1) and further in the beginning of the following year (t+2). If demands of rectification and petition of appeals were proceeded, in a few cases, taxes are paid later (t+3,…,n).

[3] The Personal Tax Register of National Board of Taxes is the main income source (See 3.2.2.). For it, prefilled tax reports from administrative registers are checked and returned by a person to tax authorities in a case of errors or additional information by 15 May. Farmers are obliged to submit tax reports in February and other self-employed persons in April or May.

3.2 Components of income

3.2.1 Differences between the national definitions and standard EU-SILC definitions

Total household gross income and disposable household income

The target variables on gross income components, on total household gross income, HY010, and on total disposable household income HY020 and total disposable household income before social transfers other than old-age and survivors' benefits HY022 and including old-age and survivors' benefits HY023 are defined according to the requirements followed from the beginning of EU-SILC (EU-SILC 065 (2009 operation)).

HY010 is the sum of gross income components at the household level. HY020 is HY010 after current transfers paid have been deducted. HY010 is a positive value (incl. 0 values). Negative values of the net income variables HY020, HY022 and HY023 on total disposable household income are due to such current transfers paid which are not related to the total household gross income (HY010+PY080G). These are regular taxes on wealth HY120G, which may exceed the amount of the total household gross income by the EU-SILC definition. The number of the sample households with negative values was five in HY020 (including PY080), 119 in HY022 and 528 in HY023. For calculating the overarching indicators, social inclusion indicators and pension indicators, the negative values were set for zero values. The conversion has an effect e.g. on the HY020 mean equivalised income estimate.

Inclusion of imputed rent in total income in particular increases HY023 among those households with that it would be otherwise negative on the basis of the previous definition. The numbers of negative values in the total income variables are respectively as follows: one in HY010, one in HY020, 47 in HY022 and 92 in HY023. Gross and disposable household income amounts are smaller (n=775), and negative in one household whose gross mortgage interests HY100G exceed imputed rent HY030G.

Tax on income and social insurance contributions HY140G and regular inter-household transfers paid HY130G were subtracted from total household gross income HY010 received during the income reference year. They do not usually cause negative values to the total household income components. Instead, negative values of HY020 results from HY120G (n=4), which is due to real estate tax. In the 2009 data there are exceptionally one household with negative HY020, which results also or primarily from HY140G.

Tax on income and social insurance contributions HY140G refers to the taxes paid from all relevant gross income components counted in HY010 and PY080G. In the producers' microdata transferred to Eurostat, there are separate income variables PY020N, PY021N and PY080N, which refer to the equivalent gross income variables (PY020G, PY021G and PY080G), after tax on income and social insurance contributions have been deducted. (See formulas for computing in table 3.3.)

Income received

The variables on gross income components were obtained by summing the detailed gross items at the person and household unit level. Especially when register income is available as very detailed items, the aggregating of the items for the target variables is closely in accordance with the regulations and descriptions (incl. EU-SILC 065/05.1; EU-SILC 065 (2009 operation)). Compared with the Regulation definitions on the EU-SILC gross income components, the following small differences, however, appear due to using register information within the Personal Tax Register frame:

- Employer's social insurance contributions PY030G include the legal and mandatory contributions exclusively but not the voluntary ones. In cases, when voluntary contributions have been done by employers to endowment insurance (excl. life insurance) or in some cases to individual pension or risk insurance scheme (if annual amounts are not defined as reasonable and exceed a certain amount) are

determined as taxable earned income by tax act and counted as a part of non-cash employee income PY020G.

- In addition to pensions and benefits from individual personal insurance schemes (ESSPROS third pillar), pensions from individual private plans PY080G include also pensions and benefits from unregistered collective voluntarily insurances (ESSPROS second pillar) taken by persons on their own or by their employers to supplement the obligatory/compulsory insurance[4]. The Tax register items contain both items. They can't be separated exactly. (See table 3.2.)

- Gross cash profits or losses from self-employment (including royalties) PY050G are in gross amounts after expenses except interest on individual loans for acquisition of income. Interests are counted as deductions for taxable income and result as lower taxes paid HY140G. PY050G values are positive (incl. 0 income). Losses are considered for lower taxes paid from other type of income in the income reference period, or in the spouse's taxes paid. If no taxable income is received at all, the confirmed losses are considered in taxes that will be paid from the income received in the following years. Therefore, confirmed losses both from the income of the income reference period and from previous periods as well can both have an effect on taxes paid from the reference period's income HY140G.[5]

- Deductions granted for loan interests expenses diminish the taxable income after expenses for acquisition of income (i.e. gross income), and result as lower taxes paid HY140G. Loan interests and a.m. losses from self-employment as well are treated in credit for investment income deficit in taxation.

- Both received social benefits and social benefits obliged to be returned to payers were included in the certain target variables on social benefits (PY090G, PY110G, PY120G, PY130G, PY140G, HY050G, HY060G and HY070G). The statistical units have then negative values on these variables if social benefits were solely returned back, or the returned amount exceeded the amount received during the income reference period. Social benefits are obliged to be returned if the income or living conditions have changed and they are not valid in relation to the granting criteria of the benefits any more.

- Income received personally by people aged under 16 (n=370) was counted in the target variable HY110G. The variable consists of the following type of income: employee income and as a very minor amount self-employment income, pension from individual private plans, survivors' benefits, disability benefits and a part of family/children-related allowances. Other social benefits within the ESSPROS system are paid for children's carers, and were counted in family benefits HY050G. Income received from interest, dividends, profit from capital investments in unincorporated businesses and from rental or property of land are also income sources for people aged under 16. They were counted in HY090G. Income on PY030G received persons under 16 has not been included in HY110G.

Current transfers paid

The target variable on **tax on income and social insurance contributions HY140G** includes taxes paid for the state taxation and for the municipal taxation. For the state taxation, taxes from earned income (incl. social benefits) are paid progressively by the person's income level, taxes from capital income are paid uniformly (28 per cent of capital income in 2008). For municipal taxation, taxes from earned income are paid by the tax rate of the place of domicile that a person hold at the end (31 Dec.) of the year preceding the income reference year.

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[4] It has to be noted in Finland's pension system, that the collective compulsory scheme (ESSPROS first pillar) is comprehensive. Benefit ceilings do not exist and consumption level of employment career is ensured (pension target level is 60-66 per cent of earnings).

[5] In the sample, 22.9 per cent of self-employed persons (PL031 =3,4 & PL040 = 1,2) had 0 income on PY050G (n = 617 / 2 693). Most of them had other income sources, employee income and property income were the marked income sources. 77.8 per cent of the persons with PY050G=0 got employee income on PY010G and/or PY020G and 73.9 per cent income on PY080G, HY040G and/or HY090G at personal level. 3.6 of persons had only other type of income and 4.5 of persons with PY050G=0 had not income at all during the reference year. Persons who were temporarily away from work are counted in the numbers. Losses were in 8.6 per cent for all self-employed persons (n= 231) and 18.5 per cent for self-employed persons without income from PY050G (n=114) in the sample. 17.7 per cent of all self-employed persons who had losses in income they were considered as deductions from taxes on capital income or credit for deficit in capital income from taxes on earned income, and for 86.6 per cent the losses were confirmed losses (the rest of the losses or all) which can be considered as deductions from the taxes on income will be received after the income reference year. In addition, asmall number of losses were counted in the spouse's taxation.

The social contributions include the following items: compulsory sickness contributions, unemployment contributions and pension contributions.

The target variable on **regular taxes on wealth HY120G** includes Real Estate Tax on real property owned in the income reference period. Besides, taxes on real property owned are paid indirectly in utility costs of dwellings by shareholders in housing corporations. The tax was not included in HY120G, but it was counted in housing costs HH070 and consequently, as a part of the housing costs component it diminishes imputed rent HY030G.

Changes in income from the survey year 2008 (from the income reference period 2007)

There are no changes from the survey year 2008.

Table 3.1 Components of income. Finland's definitions and assessed consequences resulting from differences compared with the EU-SILC definition in the 2009 survey.

Components of income	Variable name	Definition	Consequences to comparability F = Fully comparable L = Largely comparable P = Partly comparable N = Not comparable NC = Not collected
Total household gross income	HY010		F See notes below
Total disposable household income	HY020		F See notes below
Total disposable household income, before social transfers other than old-age and survivors' benefits	HY022		F See notes below
Total disposable household income, before social transfers including old-age and survivors' benefits	HY023		F See notes below
Imputed rent	HY030G	Imputed rent (equivalent market rent) 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. Imputed for the dwelling which is used as a main residence of the sample household.	F Note: The market rent refers to the value including utility costs (heating, water etc.) done besides the "space rent" in owner-occupied dwellings of housing corporations, these costs are excluded from the market rent of own houses. After deducting consistent housing costs actually paid by the household, the definition is comparable. Rented dwellings cover the ones rented from another household or from the municipality or public utility corporations. In relation to HH020 (codes 3,4), HY030G is for the households whose actually paid housing costs were lower than the imputed market rent value of the equivalent dwelling.
Income from rental of property or land	HY040G	Income received, during the income reference period, from renting a property less expenses except interest payments.	F Note: Interest payments on individual loans for acquisition of income are considered as deductions from taxable income in taxation, and thus diminish the amount of taxes paid on the income (HY140G).
Family/children-related allowances	HY050G	Financial support to households for bringing up children and financial assistance to people who support relatives other than children: income maintenance benefit in the event of childbirth, birth grant, parental leave benefit, family or child	F

		allowance, other cash benefits.	
Social exclusion payments not elsewhere classified	HY060G	Social benefits to the socially excluded or to those at risk of social exclusion: income support to people with insufficient resources, and other cash benefits as support for destitute and vulnerable persons to help alleviate poverty or assist in difficult situations.	F Note: A register-based item on income support also includes a minor part of means-tested housing allowance. Parts are not separable from each other.
Housing allowances	HY070G	Rent benefit or benefit to owner-occupiers, means-tested	F
Regular inter-household cash transfers received	HY080G	Regular monetary amounts or monetary amounts over the certain minimum amount (EUR 100) received during the income reference period, from other households or persons: compulsory child support, voluntary support to education, voluntary payments for housing costs and utility bills.	F
Alimonies received	HY081G	Regular monetary amounts or monetary amounts over the certain minimum amount (EUR 100) received during the income reference period, from other households or persons: compulsory child support.	P Note: Compulsory child support only. Voluntary alimonies and voluntary child support received on a regular basis have not been included.
Interest, dividends, profit from capital investments in unincorporated businesses	HY090G	The amount of interest from assets, dividends and profits from capital investment in an unincorporated business in which the person does not work, received during the income reference period, less expenses incurred. Interests on individual loans for acquisition of income are considered as expenses for certain income items, but not for all income items.	F Note: Interest payments on individual loans for acquisition of income are subtracted as deductions from taxable income in taxation, and thus diminish the taxes paid on income. (HY140G).
Interest paid on mortgages	HY100G	Total gross amount, before deducting any tax credit or tax allowance, of mortgage interest on the main residence of the household during the income reference period.	F
Interest paid on mortgages	HY100N	Total net amount, after deducting tax credit or tax allowance, of mortgage interest on the main residence of the household during the income reference period. Tax allowance from mortgage interest expenses is considered as deductions from taxable capital and earned income in taxation, and thus diminishes taxes paid on the income (HY140G).	F
Income received by people aged under 16	HY110G	Gross income received by all household members aged under 16 during the income reference period.	F Note: Items of PY030G have been excluded.
Regular taxes on wealth	HY120G	Real Estate Tax, which is paid on the buildings and land (excl. forests and agricultural land) owned at the beginning of the income reference period.	F Taxes paid on the ownership and use of buildings and or land by shareholders in housing companies are part of housing costs for imputed rent.
Regular inter-household transfers paid	HY130G	Regular monetary amounts or monetary amounts over the certain minimum amount (EUR 100) paid during the income reference period, to other households or persons: compulsory child support, voluntary support to education, voluntary payments for housing costs and utility bills.	F
Alimonies paid (compulsory + voluntarily)	HY131G	Regular monetary amounts or monetary amounts over the certain minimum amount (EUR 100) paid during the income reference period, to other households or persons: compulsory child support.	P Note: Compulsory child support. Voluntary alimonies and voluntary child support paid on a regular basis have not been included.
Tax on income and social insurance contributions	HY140G	Taxes on income, profits and capital gains: taxes on individual, household or tax-unit income (income from employment, property, entrepreneurship, pensions, etc.) including taxes deducted by employers (i.e. withholdings), other taxes at source and taxes on the income of owners of unincorporated enterprises paid from the income received in the income reference year. Social insurance contributions paid during the income reference period.	F Note: Interests charged on arrears of taxes due and any fines imposed by tax authorities have not been included. Taxes refer to the taxes paid gross income components counted in HY010.
Repayments/receipts for tax	HY145G	-	NC

adjustments			
Cash or near-cash employee income	PY010G	Monetary component of the compensation of employees in cash payable by an employer to an employee: value of any social contributions and income taxes payable by an employee or by the employer on behalf of the employee to social insurance schemes or tax authorities.	F Note: Tips and bonuses, and benefits based on profit sharing from stock options (excl. the ones converted into cash) have been included in this component.
Non-cash employee income	PY020G	Non-monetary income components which may be provided free or at a reduced price to an employee as part of the employment package by an employer: company car and associated costs, free or subsidised meals, luncheon vouchers, reimbursement or payment of housing-related expenses, accommodation provided free or reduced rent, other goods and services provided free or at a reduced price by their employer to their employees. Taxable income of non-monetary components. Income refers to the market value by Tax authorities and/or the value determined annually by Tax authorities. Items included in the variable are as follows: housing (incl. heating) and use of electricity, garage, car, boat, telephone, eating in certain cases, mortgage interest benefit, employer's contributions to voluntary life or pensions insurances in certain cases (amounts exceeding set criterion)	F
Non-cash employee income	PY020N	Non-monetary income components which may be provided free or at a reduced price to an employee as part of the employment package by an employer. Value of non-monetary employee income after taxes paid.	F
Non-cash employee income (company car)	PY021G	Non-monetary income components which may be provided free or at a reduced price to an employee as part of the employment package by an employer: company car. Taxable income of company car which refers to the value determined annually by Tax authorities.	F
Non-cash employee income (company car)	PY021N	Non-monetary income components which may be provided free or at a reduced price to an employee as part of the employment package by an employer: company car. Value of company car after taxes paid.	F
Employers' social insurance contributions	PY030G	Employers' legal/mandatory contributions, i.e. payments done by employers during the income reference period for the benefits of their employees to insurers covering statutory, conventional or contractual contributions in respect of insurance against social risks: contributions to legal pension schemes, legal health insurance, accident insurance, unemployment insurance and employees' group life assurance schemes. Employers' contributions refer to compulsory contributions.	L Note: Optional contributions made by employers on the basis of contractual or specific sector arrangements have not been included in PY030G. A small part of these contributions have been counted in PY020G: e.g. contributions to endowment insurance (excl. life insurance) and other such contributions to individual pension scheme and risk insurance scheme which are determined as taxable employee income. These items are part of other register items and can't be separated. Information on optional contributions is not available. Amount of optional contributions of all ones is about 10 per cent according to NA.
Optional employers' social insurance contributions	PY031G	-	
Contributions to individual private pension plans	PY035G	Contributions to private pension plans taken by individual households on their own initiative and from their own benefit, independently of their employers or government and outside social insurance scheme.	F Note: Contributions refer to the contributions done to voluntarily individual pension scheme.

Cash profits or losses from self-employment (including royalties)	PY050G	The income received, during the income reference period, by individuals, for themselves or in respect of their family members, as a result of their current or former involvement in self-employment jobs: operating profit accruing to working owners or partners of an unincorporated enterprise, royalties earned on writing, inventions and so on, not included in the profit/loss of unincorporated enterprises, rentals from business buildings, vehicles, equipment, etc., not included in the profit/loss of unincorporated enterprises, after deduction of related costs. Interests on loans for acquisition of income are considered as costs for a few income items, but not for all income items.	F Note: Interest payments on individual loans for acquisition of income are subtracted as deductions for taxable income in taxation, and thus diminish the taxes paid on income (HY120G). Positive values (incl. 0 values). Losses are considered as deductions from taxes on capital income or as credit for deficit in capital income (i.e. deductions from taxes on earned income, if a person has a insufficient capital income), or in the spouse's taxes paid. If such taxable income that deductions concern has not been received at all, losses will be considered as taxes paid from the income received in the following years.
Value of goods produced for own consumption	PY070G	-	NC Note: Value is not significant at the national level, or to particular groups of households. According to the FI-HBS 2006 results, expenditures of goods produced for own consumption (under COICOP K01 Food and non-alcoholic beverages) was 0,3 per cent from all consumption expenditures in the households in average. In employers and own-account workers in agriculture, the percentage was highest, 1,7 per cent, whereas in other socio-economic groups the percentage was as next highest, 0,4 per cent, in pensioners. When counting the expenditures of goods produced for own consumption from household disposable income, the percentages are lower in general (1,3 per cent in employers and own-account workers in agriculture). The information is not included in IDS.
Pensions received from individual private plans	PY080G	Pensions received from non-compulsory statutory schemes, i.e. voluntary collective and individual insurance schemes. For voluntary collective insurance schemes, contributions have been done also by employers.	L Note: Income component includes a small part of pensions from voluntary collective unregistered schemes done by an employer. Items (i.e. ESSPROS second pillar) cannot be separated from private individual pensions (ESSPROS third pillar). Income received from voluntary individual private plans was about 45 per cent of total amount of voluntary collective and individual schemes in 2008 according to Insurance Supervisory Authority (2008). The pensions received from voluntary collective schemes (ESSPROS second pillar) are included in PY080G, not in social benefits. They were about 3,3 per cent of the total income amount received from compulsory (ESSPROS first pillar) and supplementary collective schemes (ESSPROS second pillar) in 2008 according to Insurance Supervisory Authority (2008). Collective compulsory scheme (ESSPROS first pillar) is comprehensive in Finland's pension system.
Pensions received from individual private plans	PY080N	Pensions received from non-compulsory statutory schemes, after taxes deducted.	L Note: See above.
Unemployment benefits	PY090G	Benefits that replace income lost by a worker due to the loss of gainful employment, provide subsistence income to persons entering or re-entering the labour market, provide subsistence income to unemployed	F

		persons not members in unemployment funds, provide subsistence income to persons in long-term unemployment, and to elderly persons who retire after long-term unemployment before the legal retirement age, contribute to the cost of training or re-training people looking for employment.	
Old-age benefits	PY100G	Benefits that provide replacement income when an aged person retires from the labour market, or guarantee certain income when a person has reached the prescribed age. Old-age pensions, early old-age pensions, deferred old-age pensions and part-time pensions are counted in old-age benefits. After the pension reform came into force at the beginning of the 2005, the pension entitlement age criteria have changed. The statutory retirement age for old-age pension under the national scheme is 65 and employment scheme is 63 - 68 (earlier 65). Persons secured under the employment scheme are in certain professions entitled to start old-age pensions earlier. In addition, early old-age pensions are awarded after the age of 60 in earliest in public sector contracts and the age of 60 or 62 in private sector contracts under the employment scheme. Part-time pensions are awarded to persons after the age of 56 in the public sector and after the age of 58 in private sector contracts under the employment scheme. Income on PY110G and PY130G has been reclassified to PY100G according to person's actual retirement to the old-age pension (excl. part-time pensions) or last, by using either the statutory retirement age under the national scheme (65) or under the employment scheme (68).	F
Survivors' benefits	PY110G	Benefits that provide temporary or permanent income to people below the retirement age after the death of their spouse, partner or next-of-kin, usually when the latter represented the main breadwinner for the beneficiary. Survivors' pensions to the deceased person's children, to a surviving spouse and under the employment pension scheme to a former spouse are counted in survivors' benefits.	F
Sickness benefits	PY120G	Benefits that replace in whole or in part loss of earnings during temporary inability to work due to sickness or injury.	F
Disability benefits	PY130G	Benefits that provide an income to persons below the standard retirement age whose ability to work and earn is impaired beyond the minimum level laid down by legislation by physical or mental disability. Income for the disabled persons entering or returning to work.	F
Education-related allowances	PY140G	Grants, scholarships and other education assistance received by students.	F
Gross monthly earnings for employees	PY200G	-	NC Note: The gender pay gap is calculated by the Wages and Salaries Statistics unit, Statistics Finland

3.2.2 The source or procedure used for the collection of income variables

Income information is primarily register information, which was linked to the EU-SILC sample persons from the register database, i.e. the Total Income Database (TIDB) maintained by Statistics Finland. TIDB is compiled from register sources maintained by several administrative authorities[6], who are also in charge of the data quality. The sources cover the whole population of Finland. For TIDB, information is further checked in order to ensure the consistency of the data from several sources.

Items which were not available from registers were collected by interviews (the income definition for HY010 including PY080G): 1.3 per cent from all gross income and 2.6 per cent from all paid transfers weighted at total households were interviewed.

Interviewed items on income were as follows:
- Wages and salaries for persons who have no taxable income in Finland (incl. in PY010G)
- Interest income taxed at source (incl. in HY090G)
- Pensions from abroad to persons who have no taxable income in Finland (incl. in PY100G)
- Tax-free care allowances and convalescent's grants, unspecified tax-free pensions (incl. in PY130G)
- Maintenance support for children (incl. in HY050G)
- Strike assistance (incl. in HY060G)
- Regular inter-household transfers received (HY080G)
- Regular inter-household transfers paid (HY130G)

Furthermore, information on household main dwellings and housing costs was interviewed in order to form HY030G imputed rent according to the more complete household disposable income definition.

Interviewed items were automatically checked and corrected in relation to acceptable values in the Blaise questionnaire on the basis of information received in the course of the interview and further, after the information collection, the checking was continued in order to detect and correct erroneous values (section 2.3.2.2). Item-non responses concerned interest income taxed at source in the component HY090G interest, dividends, profit from capital investments in unincorporated businesses. For it, statistical imputing (hot-deck method) was used to impute the missing values. Otherwise, because of comprehensive register sources on income, imputing was used only to the following variables for which sufficient information was not directly available: deductive imputing for PY030G, statistical imputation (stratification method) for HY030G and gross/net conversion for PY020N, PY021N, PY080N, HY100N, HY022 and HY023.

3.2.3 The form in which income variables at component level have been obtained

The target variables on income are in gross amounts except HY020, HY022 and HY023. In addition, net amounts of PY020N, PY021N, PY080N and HY100N have been provided in the data.

3.2.4 The method used for obtaining the income target variables in the required form (i.e. as gross values)

The collected data is in gross values. See the previous chapters 3.2.1, 3.2.2, 3.2.3 and table 3.2, the column on the method used for obtaining target variables.

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[6] Administrative registers are the Personal Tax Register of National Board of Taxes, the Pension Register of the Finnish Centre for Pension, the Pension Register, Social Insurance Register, Rehabilitation Register, Study Aid Register, Housing Allowance Register of the Social Insurance Institution; the Registers of the Education Fund, the Farm Register of the Information Service Centre of the Ministry of Agriculture and Forestry, the Social Assistance Register of the National Institute for Health and Welfare (THL), the Tax Database of the military injury benefits system of the State Treasury. The main frame for income information is the Personal Tax Register to which other registers give more detailed information, or supplement it by tax-free income information.

Table 3.2 Components of income. Finland's sources or procedures used for collection of income components, the form and the methods used for obtaining the target variables in the 2009 survey

	Variable name	Source or procedure used for collection	The form	The method used for obtaining the target variable
Total household gross income (Hfile)	HY010	The register database, the IDS/EU-SILC interview	Gross value	The sum for all household members of gross personal income components (PY010G, PY021G, PY050G, PY070G, PY090G, PY100G, PY110G, PY120G, PY130G, PY140G) plus gross income components at household level (HY040G, HY050G, HY060G, HY070G, HY080G, HY090G, HY110G)
Total household gross income (incl. PY080G)	HY010	The register database, the IDS/EU-SILC interview	Gross value	The sum for all household members of gross personal income components (PY010G, PY021G, PY050G, PY070G, PY080G, PY090G, PY100G, PY110G, PY120G, PY130G, PY140G) plus gross income components at household level (HY040G, HY050G, HY060G, HY070G, HY080G, HY090G, HY110G)
Total household gross income (incl. PY030G, PY080G and imputed rent)	HY010	The register database, the IDS/EU-SILC interview	Gross value	The sum for all household members of gross personal income components (PY010G, PY021G, PY030G, PY050G, PY070G, PY080G, PY090G, PY100G, PY110G, PY120G, PY130G, PY140G) plus gross income components at household level (HY030G, HY040G, HY050G, HY060G, HY070G, HY080G, HY090G, HY110G) minus mortgage interests (HY100G).
Total disposable household income (Hfile)	HY020	The register database, the IDS/EU-SILC interview	Net value	The sum for all household members of gross personal income components (PY010G, PY021G, PY050G, PY070G, PY090G, PY100G, PY110G, PY120G, PY130G, PY140G) plus gross income components at household level (HY040G, HY050G, HY060G, HY070G, HY080G, HY090G, HY110G) minus regular taxes on wealth (HY120G), regular inter-household cash transfers paid (HY130G), tax on income and social insurance contributions (HY140G).
Total disposable household income (incl. PY080G)	HY020	The register database, the IDS/EU-SILC interview	Net value	The sum for all household members of gross personal income components (PY010G, PY021G, PY050G, PY070G, PY080G, PY090G, PY100G, PY110G, PY120G, PY130G, PY140G) plus gross income components at household level (HY040G, HY050G, HY060G, HY070G, HY080G, HY090G, HY110G) minus regular taxes on wealth (HY120G), regular inter-household cash transfers paid (HY130G), tax on income and social insurance contributions (HY140G).
Total disposable household income (incl. PY080G and imputed rent)	HY020	The register database, the IDS/EU-SILC interview	Net value	The sum for all household members of gross personal income components (PY010G, PY021G, PY050G, PY070G, PY080G, PY090G, PY100G, PY110G, PY120G, PY130G, PY140G) plus gross income components at household level (HY030G, HY040G, HY050G, HY060G, HY070G, HY080G, HY090G, HY110G) minus mortgage interests (HY100G), regular taxes on wealth (HY120G), regular inter-household cash transfers paid (HY130G), tax on income and social insurance contributions (HY140G).
Total disposable household income, before social transfers other than old-age and survivors' benefits (Hfile)	HY022	The register database, the IDS/EU-SILC interview	Net value	The total disposable income (HY020) minus **total gross to net converted transfers** of unemployment benefits (PY090G), sickness benefits (PY120G), disability benefits (PY130G), education-related allowances (PY140G), family/children-related allowances (HY050G), social exclusion not elsewhere classified (HY060G) and housing allowances (HY070G). For net conversion of the social transfer, detailed income information from the Personal Tax Register was used. The phases in deriving HY022 and HY023 were as follows:

				1. Deductions which are focused on social transfers subject to taxation were counted in order to obtain taxable social transfers. Deductions of the state and municipal taxation were done separately. 2. Taxes paid on taxable social transfers in state and municipal taxation were deducted. These are the actual taxes paid defined by the rate of the taxed social transfers and taxed earned income (incl. social transfers in the Finnish taxation). 3. The gross to net converted social transfers subject to taxation and social transfers not subject to taxation excluding and including old-age benefits and survivors' benefits were deducted from HY020, resulting in HY022 and HY023.
Total disposable household income, before social transfers including old-age and survivors' benefits (Hfile)	HY023	The register database, the IDS/EU-SILC interview	Net value	The total disposable income (HY020) minus **total gross to net converted transfers** of unemployment benefits (PY090G), old-age benefits (PY100G), survivors' benefits (PY110G), sickness benefits (PY120G), disability benefits (PY130G), education-related allowances (PY140G), family/children-related allowances (HY050G), social exclusion not elsewhere classified (HY060G) and housing allowances (HY070G). See the method of HY022.
Imputed rent	HY030G	**The stratification method** has been used for imputing equivalent gross rent values to the EU-SILC sample dwellings from the external data source compiled annually by Statistics Finland. The data being coherent with NA includes mean gross rents/m2 to dwellings of different sizes, types and municipalities (strata). For producing gross rent values to the data, Rent statistics on actual market rents (incl. new and old contracts) has been used as a primary data source. Rent statistics is compiled by **conventional methods based on classification and regression analysis (hedonic method)**. Information is collected by monthly Labour Force Survey interviews (the whole sample size is 12,000), and from register sources maintained by Statistics Finland. Data according to stratum has been produced to the regions (municipalities) with narrow market rents by disaggregating information on rents of upper level classification of regions (NUTS3) or secondarily, by using additional information on statistics of Prices of Dwellings by Statistics Finland. The IDS/EU-SILC interviewed data on sample household dwellings. The HBS interviewed data (for estimating insurance for detached houses) in 2006.	Gross value	**Stratification method:** Mean gross rent / m2 was imputed to the floor area (square meter) of the sample households' main dwellings by the following classes: - HH010 (detached house with 1-2 dwellings or other kind of accommodation, semi-detached or terraced house, apartment or flat in the block of flats) - HH030 (1, 2, 3, 4+) - Construction or renovation year (-60, 61-70, 71-80, 81-90, 91-) - Municipality and district area in the municipalities with the highest number of population (Helsinki, Espoo, Vantaa, Tampere, Turku) according to postal code. To obtain the value of imputed rent, costs on housing the household actually paid (rents, maintenance electricity, gas and other fuels, incl. subsidies received for them, minor repairs) and the ones imputed (insurance for detached houses) were subtracted from the gross rent value. For owners of detached houses: heating costs were excluded from the gross rent value of external data source and were not an item of subtracted housing costs. For others, (shareholders of stock in a housing corporation (joint owners) and tenants): heating costs were included in the gross rent value and subtracted housing costs. Tax on real estate is a part of maintenance charges in shareholders of stock in a housing corporation (joint owners). Tax on real estate of owners is included in HY120G. The items of costs on housing follow the definition of the market rent. Imputed minor repairs are derived from the EU-SILC sample, and insurance from the HBS. Comparability over time: The data is comparable over the EU-SILC survey

			years.	
Income from rental of property or land	HY040G	Register database	Gross value	
Family/children-related allowances	HY050G	Items either from the Register database or from the IDS/EU-SILC interview	Gross value	
Social exclusion payments not elsewhere classified	HY060G	Items either from the Register database or from the IDS/EU-SILC interview	Gross value	
Housing allowances	HY070G	Items either from the Register database or from the IDS/EU-SILC interview	Gross value	
Regular inter-household cash transfers received	HY080G	The IDS/FI-SILC interview	Gross value	
Alimonies received (compulsory and voluntary)	HY081G	The IDS/FI-SILC interview	Gross value	
Interest, dividends, profit from capital investments in unincorporated businesses	HY090G	Items either from the Register database or from the IDS/EU-SILC interview.	Gross value	Item non-responses of interest income taxed at source were imputed for the households that responded in the interview that they had received the income during the income reference year, but did not specify the exact amount. Imputing was done in two phases: first, to the households with missing exact value, but the answered range value and second, to ones with completely missing value. **Hot-deck method was used as a statistical imputation method.** For the first phase imputation, the data including households that had received income was grouped to classes by domicile code (dwelling location) and range value, from within donor values (interviewed amount) were selected to recipient households (missing amount) randomly. For the second phase imputation, the data (including units with imputed value from the first phase), was grouped to classes by domicile code, socio-economic status and the number of household members. Donor values (interviewed amount) were selected within these strata to recipient households (missing amount) randomly as well.
Interest paid on mortgages	HY100G	Register database	Gross value	
Interest paid on mortgages	HY100N	Register database	Net value	Net conversion of gross value was done by information on taxation: **deductive imputation**.
Income received by people aged under 16	HY110G	Register database	Gross value	
Regular taxes on wealth	HY120G	Register database	Gross value	
Regular inter-household transfers paid	HY130G	The IDS/EU-SILC interview	Gross value	
Regular inter-household transfers paid	HY131G	The IDS/EU-SILC interview	Gross value	
Repayments/receipts for tax adjustments	HY135G	-	-	-
Tax on income and social insurance contributions	HY140G	Register database	Gross value	Taxes paid from pensions received from private insurance plans (PY080G) have been included.
Cash or near-cash employee income	PY010G	Register database	Gross value	
Non-cash employee income	PY020G	Register database	Gross value	
Non-cash employee income	PY020N	Register database	Net value	Net conversion of gross value by the rate of actually paid taxes from taxable earned income: **deductive imputation.**
Non-cash employee income (company car)	PY021G	Register database	Gross value	
Non-cash employee income (company car)	PY021N	Register database	Net value	Net conversion of gross value by the rate of actually paid taxes from taxable earned income: **deductive imputation.**
Employers' social insurance contributions	PY030G	Register database	Gross value	**Deductive imputation** using information about obliged contributions of the compulsory social insurance schemes and information about employer.
Optional employers' social	PY031G	-	-	-

insurance contributions				
Optional employers' social insurance contributions	PY035G	Register database	Gross value	
Cash profits or losses from self-employment (including royalties)	PY050G	Register database	Gross value	Comparability over time: The component includes **items of timber selling as earned and capital forestry income, which are solely from registers**. In the survey years 2004-2006, a small part of the income was interviewed. Forestry tax reform has also been implemented. Accordingly, **the imputation method of expenses had been changed for these gross items**. Expenses are computed by fixed parameters from gross income items based on register information about timber selling income and expenses in TSID (Total Statistics on Income Distribution). Compared with the previous surveys, the register coverage has improved and provides more reliable data in line with the forestry tax reform. Based on the results from the 2007 survey year data, estimated total amount was 13,3 per cent of PY050G and 0.7 per cent of HY010 by the new method, and 13,7 per cent of PY050G and 0.8 per cent of HY010 by the (old) method used. Distributions of the item were almost completely correlated, small differences exist in income at the unit level.
Value of goods produced for own consumption	PY070G	-	-	-
Pensions received from individual private plans	PY080G	Register database	Gross value	
Unemployment benefits	PY090G	Register database	Gross value	
Old-age benefits	PY100G	Register database and the IDS/EU-SILC interview data	Gross value	Survivors' benefits and disability benefits which were received simultaneously with old-age benefits were regrouped into old-age benefits by using the statutory retirement ages of the national scheme (65), employment scheme (63-68) or under the employment scheme lower statutory retirement age in certain professions.
Survivors' benefits	PY110G	Register database	Gross value	
Sickness benefits	PY120G	Register database	Gross value	
Disability benefits	PY130G	Register database	Gross value	
Education-related allowances	PY140G	Register database	Gross value	
Gross monthly earnings for employees	PY200G	-	-	-

3.2.5 Comparison of income target variables and number of persons who received the income from each income component with the previous survey years

Table 3.3 presents the income data over the survey years based on the revised cross-sectional data files.

Table 3.3 Mean income by each income target variable and the number of units received income in the 2004-2009 survey years

Survey year	2004	2005	2006	2007	2008	2009	2004	2005	2006	2007	2008	2009
All Households	Mean	Mean	Mean	Mean	Mean	Mean	N (1 000)	N (1 000)	N (1 000)	N (1 000)	N(1000)	N (1 000)
Variable												
HY010 (incl. PY080G)	37 031	38 710	40 047	41 458	43 095	44 843	2 404	2 415	2 435	2 455	2 483	2 513
HY020 (incl. PY080G)	27 610	28 992	29 788	30 939	32 316	33 768	2 404	2 415	2 435	2 454	2 483	2 513
HY022 (incl. PY080G)	23 572	24 868	25 580	26 788	28 203	29 680	2 326	2 328	2 374	2 382	2 417	2 455
HY023 (incl. PY080G)	19 423	20 594	21 082	22 202	23 384	24 502	2 266	2 232	2 335	2 323	2 351	2 393
HY010	36 804	38 479	39 787	41 128	42 668	44 416	2 404	2 415	2 435	2 455	2 483	2 513
HY020	27 383	28 761	29 528	30 609	31 889	33 341	2 404	2 415	2 435	2 454	2 483	2 513
HY022	23 345	24 638	25 320	26 458	27 776	29 253	2 326	2 328	2 374	2 382	2 417	2 455
HY023	19 196	20 363	20 822	21 873	22 957	24 075	2 266	2 231	2 335	2 323	2 351	2 393
HY030G	3 606	3 666	3 822	3 883	3 961	4 135	1 817	1 849	1 894	1 900	1 903	1 931
HY040G	339	350	409	409	422	429	165	176	176	159	165	173
HY050G	998	1 040	1 024	1 044	1 052	1 022	604	601	600	602	604	598
HY060G	172	169	152	166	187	184	222	218	212	207	213	185
HY070G	353	352	366	386	382	366	521	523	531	540	530	516
HY080G	115	128	125	137	115	134	204	215	222	236	216	243
HY090G	1 404	1 752	1 554	1 423	1 662	1 643	1 455	1 482	1 975	1 829	1 849	1 880
HY100G	501	492	543	688	999	1 216	692	720	774	787	819	842
HY110G	40	47	61	44	48	46	57	60	60	56	51	61
HY120G	108	126	102	87	89	101	987	985	1 024	1 015	987	1 129
HY130G	167	197	207	212	232	263	291	309	312	343	362	435
HY140G[1]	9 146	9 395	9 950	10 221	10 458	10 711	2 349	2 358	2 389	2 396	2 424	2 457
HY100N	354	348	388	493	716	870	692	720	774	787	819	842
All persons aged 16 and over												
Variable												
PY010G	13 144	13 700	14 285	14 998	15 647	16 640	2 648	2 645	2 681	2 691	2 737	2 776
PY020G[2]	109	99	108	194	215	200	79	71	67	596	642	656
PY021G	.	.	.	121	129	123	.	.	.	76	81	77
PY030G	.	.	.	3 786	3 953	4 129	.	.	.	2 663	2 708	2 746
PY035G	116	137	134	117	118	116	330	342	392	403	450	482
PY050G	1 280	1 293	1 337	1 322	1 536	1 500	489	476	466	443	480	469
PY080G	131	133	150	192	248	250	140	145	161	189	212	178
PY090G	813	848	856	819	754	699	660	652	730	690	663	641
PY100G	2 843	2 973	3 142	3 227	3 411	3 661	906	918	946	948	950	989
PY110G	102	94	92	75	76	63	76	69	72	55	55	48
PY120G	95	101	118	110	115	124	205	222	239	243	240	240
PY130G	760	762	813	783	797	840	353	364	369	356	368	362
PY140G	140	131	135	130	130	141	433	436	429	432	429	423
PY020N	.	.	.	127	142	134	.	.	.	596	642	656
PY021N	.	.	.	76	83	79	.	.	.	76	81	77
PY080N	96	99	111	143	185	185	140	145	161	189	212	178

[1] HY140G includes taxes paid and social contributions on the HY010 gross income components including PY080G

[2] PY020G includes income of PY021G only in the sy2004- sy2007.

4 Coherence

4.1 Comparison of income target variables and number of persons who received income from each income component with external sources

Tables 4.1 - 4.3 show results from income comparisons with relevant data sources. They are the Income Distribution Statistics (IDS), Total Statistics on Income Distribution (TSID) and National Accounts (NA) by Statistics Finland. IDS is the primary national source for the household income statistics. TSID is compiled from the Total Income Database (TIDB) which is used as a register income source both for IDS and EU-SILC. The TSID household definition is based on the household-dwelling unit, not the housekeeping unit like in the sample statistics IDS and EU-SILC.

Social transfers received have been compared with the social expenditure on cash benefits by main group from the European System of Integrated Social Protection Statistics (ESSPROS) compiled by the National Institute for Health and Welfare (THL), Finland. Social transfers of ESSPROS cover also those ones paid to the persons in institutional care (incl. pensions) and the persons permanently resident abroad, but who are entitled to benefits (e.g. employees and their family members). Benefits in kind (e.g. institutional care for children, young people and elderly) are not in the figures except housing allowances.

The differences on total income amounts across the statistics are mostly due to differences in items defined to the components. Vast majority of the income information is collected to the EU-SILC sample units from TIDB. Further, the EU-SILC data is estimated to the private households by using information on crucial demographic and income variables from TIDB in the sampling and the weightings (chapter 2.1). Therefore, inconsistencies between the estimated EU-SILC and TSID income are primarily resulting from the unit-non responses among the households having received certain type of register-based income not used in the weightings (see below). Interviewed information again completes the register information on income, and as a result from this part, the income is slightly more comprehensive in EU-SILC than in TSID.

The EU-SILC and IDS income data is processed equally in the integrated statistical survey. The sample and the frame households are the same. Small differences between these two statistics are caused by income definitions and classifications. They are as follows, IDS includes:
- Profits from sales
- All items of gross non-cash employee income
- Imputed rent and mortgage interests, except to household dwellings rented from a public, municipal, voluntary or non-profit agency (defined as housing benefits in kind and as a part of adjusted household disposable income).

IDS excludes inter-household transfers paid except a compulsory child support.

Compared with the ESSPROS and with the TSID social benefits in more detail (table 4.1), definitions and used classifications have an effect on the figures. The definitions cause differences between EU-SILC and ESSPROS statistics in the following income components: PY110G, PY120G, PY130G, HY070G. Sick pay which is included in EU-SILC PY010G, not in PY120G, consists of 54 per cent of all sickness cash benefits in ESSPROS. PY110G survivors' benefits and PY130G sickness benefits have not been grouped to PY100G old age benefits after statutory retirement age in ESSPROS like in EU-SILC. From housing allowances which have been counted in HY070G students' housing supplements have not been included in ESSPROS.

In addition to estimation, under-coverage in relation to ESSPROS in particular is also due to the reference population (See above). The effect of the benefits received in resident in collective households and institutions included in ESSPROS can be supposed to be small on the basis of the estimated number of these persons (chapter 3.1). Information on these and social benefits paid abroad is not available as a separate statistical data from ESSPROS.

The differences from comparing income recipients by main income components in table 4.3 are caused by the same factors as the differences in total income sums. Further, the household definition used in the sample statistics and TSID has also an effect on the figures.

Table 4.1 Total gross income of private household in the income reference year 2008 according to different data sources: Income Distribution Statistics (IDS), Total Statistics on Income Distribution (TSID), National Accounts (NA), European System of Integrated Social Protection Statistics (ESSPROS). Difference of the EU-SILC income amounts (%) to other statistics.

IDS		
Income components	Difference %	Notes
2.1. Gross employee income (py010g, py021g)	-0.5	IDS: Employee income received by persons aged under 16 is included. All items of gross non-cash employee income are included.
2.2. Self-employment income	-0.1	IDS: Employee income received by persons aged under 16 is included.
2.3.Property income (hy040g, hy090g, py080g)	-36.6	IDS: Profits from sales in property income is included.
2.4. Current transfers received	-1.0	IDS: Imputed rent to dwellings rented from another household and income received by persons aged under 16 is included.
2.5. Other income received	100.0	Income (HY110G) is included in other IDS income components.
2.6. Current transfers paid (incl. py080g taxes)	-0.6	See above. EU-SILC; taxes from other non-cash employee and profits from sales are included.
Total gross household income including PY080g (excluding imputed rent and mortgage interests, negative values have been changed for 0-values).	-8.2	The difference is mostly due to other non-cash employee income than a company car (-), profits from sales (-) and household transfers received except compulsory child support (-).
Total disposable household income including PY080g (excluding imputed rent and mortgage interests, negative values have been changed for 0-values).	-0.5	The difference is mostly due to other non-cash employee income than a company car (-), profits from sales (-) and inter-household transfers paid except compulsory child support (-).
Components not in the EU-SILC definition, included in the more complete IDS total disposable household income definition		
- Gross employee income (py010g, py020g)	0.0	IDS: Employee income received by persons aged under 16 is included.
- Imputed rent	3.6	IDS: Imputed rent to rental dwellings except the ones rented from another household at a lower rent than the market price or free has not been included. This item is included in current transfers received.
- Interest payments	0.0	
TSID		
Income components	Difference %	
2.1. Gross employee income (py010g, py021g)	-0.4	TSID: Employee income received by persons aged under 16 is included. All items of gross non-cash employee income are included.
2.2. Self-employment income	0.1	TSID: Employee income received by persons aged under 16 is included.
2.3.Property income (hy040g, hy090g, py080g)	-34.0	TSID: Profits from sales which are included, interests income taxed at a source is not included.
2.4. Current transfers received	3.2	TSID: All inter-household transfers received are not included
2.5. Other income received	100.0	Income (HY110G) is included in other TSID income components.
2.6. Current transfers paid	1.1	TSID: Inter-household transfers paid are not included. Tax paid on profits from sales is included.
Total gross household income including PY080g (excluding imputed rent and mortgage interests, negative values have been changed for 0-values).	-1.3	In addition to estimation of EU-SILC, the difference is mostly due to other non-cash employee income than a company car, profits from sales included in TSID, and household transfers received not included in TSID.
Total disposable household income including PY080g (excluding imputed rent and mortgage interests, negative values have been changed for 0-values).	-1.9	In addition to estimation of EU-SILC, the difference is mostly due to other non-cash employee income than a company car, profits from sales included in TSID, and inter-household transfers not included in TSID.
Components not in the EU-SILC definition, included in the more complete IDS total disposable household income definition		
- Gross employee income (py010g, py020g)	0.1	IDS: Employee income received by persons aged under 16 is included.

NA		
Income components	Difference %	
2.1. Gross employee income (py010g, py021g)	-2.0	
2.2. Self-employment income	-11.2	
2.3.Property income (hy040g, hy090g, py080g)	..	
2.4. Current transfers received	-10.9	
2.5. Other income received	.	NA: Income (HY110G) is included in other income components.
2.6. Current transfers paid	-19.1	
Total gross household income including PY080g (excluding imputed rent and mortgage interests, negative values have been changed for 0-values).	-9.8	.
Total disposable household income including PY080g (excluding imputed rent and mortgage interests, negative values have been changed for 0-values).	-6.2 .	
	.	
Components not in the EU-SILC definition. They have been included in the more complete NA total disposable household income definition		
- Gross employee income (py010g, py020g)	-1.5	
- Imputed rent	-1.3	NA: Imputed rent of owner occupied dwellings (gross)
- Interest payments	-9.9	
ESSPROS		
Income components	Difference %	
PY090G. Unemployment benefits	2.8	
PY100G. Old-age benefits	8.9	ESSPROS does not include income received from PY110G and PY130G for the persons after the standard retirement age.
PY110G. Survivors' benefits	-83.0	See PY100G.
PY120G. Sickness benefits	-74.8	ESSPROS includes sick pay which has been counted in PY010G employee income.
PY130G. Disability benefits	-13.6	See PY100G.
PY140G. Education-related allowances	.	
HY050G.Family/children -related allowances	-6.7	ESSPROS includes the income maintenance benefits paid in the event of child birth and the parental leave benefits which are in PY010G employee income.
HY060G. Social exclusion payments not elsewhere classified	-56.0	ESSPROS includes wage quarantee, which is in PY010G employee income.
HY070G. Housing allowances	18.4	ESSPROS does not include students' housing supplements. As of 2008, ESSPROS contains pensioners' housing allowances, when earlier they were items of PY100G and PY130G.
Total, excl. education-related allowances	-9.2	
Same definitions in accordance with ESSPROS:		
HY070G. Housing allowances	-10.4	
PY100G,PY110G,PY130G	-3.0	

.. Information is not available; . Information is not logical

Table 4.2 Income items of social benefits in the income reference year 2008 in the EU-SILC and TSID. Difference of the EU-SILC income amounts (%) to TSID.

Income components	Difference %	
PY090G. Unemployment benefits	-0.7	
PY100G. Old-age benefits	11.7	TSID includes pensioners' housing allowances (benefits in kind), it does not include income received from PY110G and PY130G for the persons who are on old-age pensions after the standard age.
PY110G. Survivors' benefits	-81.1	See PY100G.
PY120G. Sickness benefits	3.7	
PY130G. Disability benefits	-2.4	See PY100G
PY140G.Education-related allowances	39.0	TSID does not include interviewed items. Certain differences in classification.
HY050G. Family/children -related allowances	1.9	
HY060G. Social exclusion payments not elsewhere classified	-8.8	
HY070G. Housing allowances	-4.3	

Table 4.3 The number of income recipients in the income reference year 2008 according to EU-SILC, IDS and TSID. Difference of the EU-SILC income recipient households and household persons (%) to IDS and TSID.

IDS	Households	Household persons	
Income components	Difference %	Difference %	Notes (See Table 4.1)
2.1. Gross employee income (py010g, py021g)	-	-	
(py010g, py020g)	-0.1	-1.1	
2.2. Self-employment income	-1.0	1.8	
2.3. Property income (incl. py080g)	-0.8		
2.4. Current transfers received	0.0	.	
2.5. Other income received	.	.	
2.6. Current transfers paid	0.1	.	
Imputed rent	13.6	..	
Interest payments	0.0	.	
TSID			
Income components	Difference %	Difference %	
2.1. Gross employee income	0.4	-0.8	
2.2. Self-employment income	4.4	4.1	
2.3. Property income (incl. py080g)	13.2		A high number of households having income from interests taxed at a source not included in TSID.s
2.4. Current transfers received	4.0	.	
2.5. Other income received	.	.	
2.6. Current transfers paid	2.1	.	

.. Information is not available; . Information is not logical

4.2 Comparison of labour target variables with Labour Force Survey (LFS)

The differences between the EU-SILC self defined current activity status (PL031) and the LFS activity status are logical to their definitions. Compared with EU-SILC, LFS uses the ILO concept which is more detail in relation to the employment and unemployment definitions in particular. After deriving more comparable unemployment definition with LFS by using information on actively looking for a job (PL020) and availability for work (PL025) in addition to self defined current activity status, Finnish EU-SILC results less persons in labour force and consequently, more persons not in labour force groups (table 4.4). EU-SILC prioritises employment, but not as definitely as in LFS. In the interview, one hour working or temporary absence from work was not so strictly considered as working in the interview, although the latter criterion (temporary absence) had been provided in the survey question definition and interview guidelines. In a case of non-employment a person's perception of her/his activity was based on one activity of the defined non-employed activities in December.

EU-SILC target persons refer to private household persons aged 16-64, whereas in LFS they refer to all persons aged 15-64. There are also differences in reference time periods which may explain the differences

between the variable frequencies. The whole December was the time reference period in EU-SILC, whereas it was used one week periods over the whole December as the references periods in LFS. The LFS estimates are the averages of these reference periods.

The sampling and weighing methods (e.g. non-response correction and calibration) differ between the surveys, which affect the figures to a some extent.

Table 4.4 Self defined current activity status (PL031) completed by information on looking for a job (PL020) and availability for a job (PL025) according to EU-SILC and LFS, persons of aged 16-64 (15-64 in LFS) in December 2008, %

	EU-SILC (December)		EU-SILC (December)	LFS (December)
PL031 Self defined activity status				
1,3. Working full time	59.2	Working full time or part time	66.2	69.5
2,4. Working part time	7.0			
5. Unemployed	7.1	PL020 & PL025. Without work. actively looked for a job in previous four weeks and available for work in the next two weeks	3.9	4.5
In labour force	73.3		70.1	74.1
6. Pupil, students, further training etc.	10.9			
7. In retirement or in early retirement or has given up business	4.1			
8. Permanently disabled or/and unfit to work	7.1			
9. In compulsory military or community service	0.4			
10 .Fulfilling domestic tasks and care responsibilities	3.6			
11. Other inactive persons	0.6			
Not in labour force	33.8		29.9	25.9
Total	100.0		100.0	100.0
Number of persons	3 420 976		3 420 976	3 542 000

Table 4.5 Status in employment (PL040) according to EU-SILC and LFS, employed persons of aged 16-64 (15-64 in LFS) in December 2008, %

	EU-SILC (December)	LFS[1] (December)
PL040 Status in employment		
1. Self-employed with employees	5.0	..
2. Self-employed without employees	8.5	..
Self employed in total	13.4	12.5
3. Employee	86.4	87.2
4. Family worker	0.2	0.3
Missing	0.0	0.0
Total	100.0	100.0
Number of persons	2 265 888	2 462 000

[1] Family workers refer to family members of self-employed persons and they are counted to self-employed persons in LFS

Table 4.6 Occupation (PL050) in employment according to EU-SILC and LFS, employed persons of aged 16-64 (15-64 in LFS) in December 2008, %

	EU-SILC (December)	EU-SILC[1] (December)	LFS (December)
PL050 Occupation			
(11-13) Legislators, senior officials and managers	11.5	11.4	10.5
(21-24) Professionals	18.4	18.0	18.5
(31-34) Technicians and associate professionals	16.7	17.5	15.9
(41-42) Clerks	6.9	7.0	6.6
(51-52) Service workers and shop and market sales workers	16.3	16.2	16.2
(61) Skilled agricultural and fishery workers	3.6	3.8	3.7
(71-74) Craft and related trades workers	12.4	12.5	12.1
(81-83) Plant and machine operators and assemblers	7.4	7.0	8.3
(91-93) Elementary occupations	6.4	6.3	7.6
(01) Armed forces	0.4	0.4	0.4
Missing	0.0	0.0	0.0
Total	100.0	100.0	100.0
Number of persons	2 265 888	2 317 391	2 462 000

[1] Selected respondent

Table 4.7 NACE (Rev. 2; PL111) in employment. Employed persons of aged 16-64 (EU-SILC: selected respondents; LFS persons aged 15-64) in December 2008, %

	EU-SILC[1] (Rev.2; December)	LFS
PL111 NACE		
A Agriculture, forestry and fishing	4.2	3.9
B Mining and quarrying	0.2	0.2
C Manufacturing	16.7	16.6
D Electricity, gas, steam and air conditioning supply	0.7	0.5
E Water supply; sewerage, waste management and remediation activities	0.4	0.5
F Construction	7.5	7.4
G Wholesale and retail trade; repair of motor vehicles and motorcycles	12.5	12.5
H Transportation and storage	6.9	6.2
I Accommodation and food service activities	3.1	3.4
J Information and communication	3.8	4.0
K Financial and insurance activities	2.4	2.2
L Real estate activities	0.9	0.7
M Professional, scientific and technical activities	6.6	5.6
N Administrative and support service activities	2.4	4.4
O Public administration and defence; compulsory social security	5.2	4.5
P Education	7.2	6.5
Q Human health and social work activities	14.4	15.6
R Arts, entertainment and recreation	1.9	1.9
S Other service activities	3.0	2.5
T Activities of households as employers; undifferentiated goods- and services-producing activities of households	0.1	
for own use	0.0	0.3
U Activities of extraterritorial organisations and bodies	4.2	0.0
Missing	0.0	0.3
Total	100.0	100.0
Number of persons	2 317 391	2 462 000

[1] Selected respondent