

**Final Quality Report
Relating to the
EU-SILC Operation 2005-2008**

Austria



Vienna, December 22nd, 2010

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Introductory remark to the reader

The present document presents quality evaluation criteria for the EU-SILC 2008 operation as foreseen in Council Regulation No. 1177/2003 and follows the structure outlined in Commission Regulation No. 28/2004. To avoid redundancies with the Intermediate Quality Report for the EU-SILC operation 2008 this Final Quality Report has a clear focus on the EU-SILC longitudinal component, strictly following the structure specified in Annex III of the aforementioned Commission Regulation.

In Austria EU-SILC operations started in 2004. A rotational design was implemented to integrate the cross-sectional and longitudinal component from 2004 onwards. Thus in 2008 the EU-SILC operation contains a panel rotation that extends to four consecutive years. Rotation 1/05, which started in 2005 and has been traced until 2008 (and will not be followed up in 2009) represents a fully matured longitudinal component to calculate the longitudinal persistent-at-risk-of-poverty indicator (see chapter 1 for details).

To direct reader's attention in particular to the longitudinal component and illustrate its quality, Statistics Austria decided to concentrate on the sample's part which was eligible to be traced between 2005 and 2008, i.e. the rotational group R1/05. Where necessary this is complemented by information on the full sample of the cross-sectional component 2008 (R1/05, R2/06, R3/07, R4/08)¹.

¹ For details of the full sample of the cross-sectional components of EU-SILC 2005-2008, see the respective intermediate quality reports of the EU-SILC operation of the years 2005-2008.

1. Common longitudinal European Union Indicators based on the longitudinal component of EU-SILC

The longitudinal dataset 2005-2008 of the EU-SILC operation comprises a panel of four years (2005-2008). The main objective of the four-year panel rotation is to deliver an adequate data basis for the calculation of the persistent-at-risk-of-poverty indicator.

As described in the EUROSTAT document Doc. LC-ILC/39/09/EN-rev.1 of the working group on living conditions the assessment of persistent poverty is one of the primary indicators on social inclusion.² For the estimation of the percentage of panel-persons living with at-risk-of-poverty, the at-risk-of-poverty threshold from the cross-section of each year of the four-year panel is used.³ People who were missing in at least one of the four-year and therefore are not part of the balanced panel 2005-2008 are excluded from the analysis. The balanced panel consists of 2,511 persons living in 1,103 households in 2008.

The abovementioned strategy complies fully with the one described in document LC-ILC 39/09 (page 43 ff.). Persistent at-risk-of-poverty occurs if a panel person is at-risk-of-poverty (according to the cross-sectional threshold) in the last wave of the four-year panel (i.e. 2008) and has been at-risk-of-poverty at least two times during the preceding waves. Table 1 shows possible combinations of being at-risk-of-poverty which are contained in the longitudinal at-risk-of-poverty indicator:

Table 1 : Types of persistent-at-risk-of-poverty

Duration of at-risk-of-poverty	T 2008	T-1 2007	T-2 2006	T-3 2005
4 years	at-risk-of-poverty	at-risk-of-poverty	at-risk-of-poverty	at-risk-of-poverty
3 years	at-risk-of-poverty	at-risk-of-poverty	at-risk-of-poverty	not at-risk-of-poverty
3 years	at-risk-of-poverty	at-risk-of-poverty	not at-risk-of-poverty	at-risk-of-poverty
3 years	at-risk-of-poverty	not at-risk-of-poverty	at-risk-of-poverty	at-risk-of-poverty

According to the EU-SILC longitudinal dataset 5.6 % of all persons who are within the reference population from 2005-2008 are under persistent-at-risk-of-poverty.

Table 2 : Persistent-at-risk-of-poverty rate by sex

At-persistent-risk-of-poverty		
Age	Sex	%
Total	T	5.6
	M	4.9
	F	6.3
0-17	T	4.0
	M	3.7
	F	5.0
18-64	T	11.6
	M	10.8
	F	12.3

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

² See page 9 in the respective document.

³ This revised calculation method differs from the method applied in Austria the previous year. For the EU-SILC 2007 operation the at-risk-of-poverty threshold was recalculated for each wave of the balanced panel instead of using the fixed threshold from the cross-section of each wave (compare: Austrian final quality report 2004-2007, ch. 1).

2. Accuracy

Accuracy refers to the closeness of calculations and estimates to the exact or true population values.

2.1. Sampling design

2.1.1. Type of sampling

The longitudinal component of EU-SILC 2008 as transmitted to EUROSTAT by March 2009 consists of the rotational group 1 of EU-SILC 2005, the rotational groups 1 and 2 of the cross-sectional sample in EU-SILC 2006 and the rotational groups 1, 2 and 3 of the cross-sectional samples of EU-SILC 2007 and 2008.

The sample for the first wave of the longitudinal component was drawn from the central registration register ZMR (*Zentrales Melderegister*), a constantly updated population register based on the register of residence. The Ministry of the Interior administers this register. For the longitudinal component addresses were selected with a simple random sampling procedure.

2.1.2. Sampling units

Sampling units are dwelling units registered in the ZMR. The sampling frame consisted of all accommodations with at least one person aged 16 or older who has her/his main residence (*Hauptwohnsitzmeldung*) in these accommodations. The following units were excluded: institutional housing facilities, dwelling units in which all persons with their main residence in this unit were younger than 16 years and units which have been selected for the prior samples of EU-SILC.

2.1.3. Stratification criteria

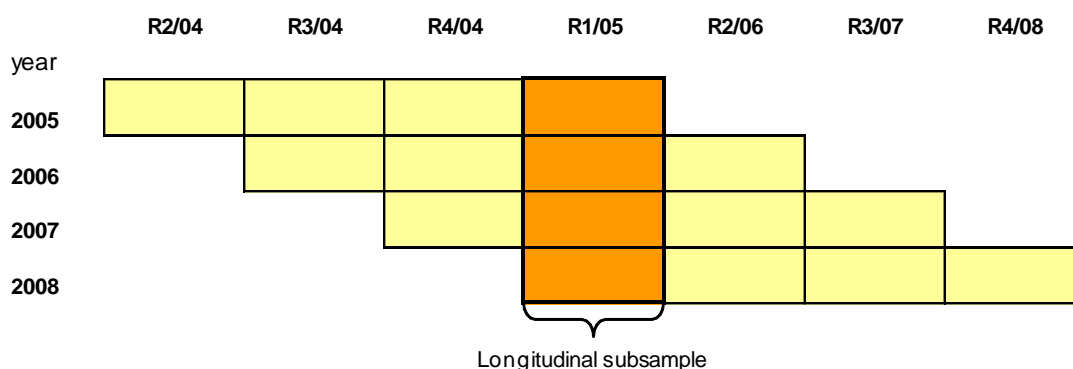
In the first wave of the four-year longitudinal component 2005-2008 (R1/05) a simple random sample without stratification was used.

2.1.4. Sample size and allocation criteria

The necessary sample size for Austria was calculated according to the Commission regulation (EC) No 1177/2003 to guarantee 4,500 households cross-sectionally and 3,250 households longitudinally under simple random sampling.

The cross-sectional sample of EU-SILC 2005 therefore consisted of 8,494 addresses which were used by the fieldwork institute. The four-year longitudinal component of EU-SILC 2008 consists of the rotational groups 1 of 2005, 2006, 2007 and 2008.

Figure 1: Rotational design - longitudinal design 2005 - 2008



The dataset of the longitudinal component consists, overall, of 9,103 records of households: the original households of the first wave 2005 (N = 3,823), the follow-up households 2006 (N = 1,986), the split households 2006 (N = 25), the follow-up households of 2007 (N = 1,781), the split households of 2007 (N = 63), the follow-up households of 2008 (N = 1,377) and the split households of 2007 (N = 48).

The total of 6,315 completed household interviews consists of the 1,986 interviews in 2005, the 1,693 interviews with followed-up households in 2006, the 14 interviews with split households in 2006, the 1,491 interviews with follow-up households in 2007, the 28 interviews with split households in 2007, the 1,076 interviews with follow-up households in 2008 and the 27 interviews with split households in 2008.

In 2006 all households successfully interviewed in 2005 were followed-up (N = 1,986). Hence the number of issued addresses in 2006 is the same as the number of accepted interviews in 2005. These households and 25 split households then constitute the 2,011 used addresses of 2005. The households provided 2006 1,707

interviews (1,693 follow-up and 14 split). The households providing accepted interviews in 2006 plus the households successfully interviewed in 2005 but not 2006, form the basis of the 1,781 follow-up households of 2007. Adding the 63 split households, these constitute the basis of 1,844 addresses of 2007. 1,519 household interviews could be successfully conducted in 2007, including 28 interviews of split households. The basis of 2008, the final year of the panel, consists of 1,425 addresses. 48 of these addresses belong to split-off households. The remaining 1,377 addresses consist of accepted household interviews of the preceding year and addresses which were part of the panel in 2005 and/or 2006 but not in 2007. These households finally provided us with 1,103 accepted household interviews in 2008.

Table 3 : Sample size, addresses and household interviews (R1/05)

	2005		2006				2007				2008			
	N	%	Follow-up households	%	Split households	%	Follow-up households	%	Split households	%	Follow-up households	%	Split households	%
Longitudinal component														
Used addresses	3,823	100.0	1,986	100.0	25	100.0	1,781	100.0	63	100.0	1,377	100.0	48	100.0
Addresses existent	3,747	98.0	1,986	100.0	25	100.0	1,777	99.8	63	100.0	1,375	99.9	47	97.9
Addresses not existent	76	2.0	0	0.0	0	0.0	4	0.2	0	0.0	2	0.1	1	2.1
Gross sample	3,747	100.0	1,986	100.0	25	100.0	1,777	100.0	63	100.0	1,375	100.0	47	100.0
Addresses successfully contacted	3,658	97.6	1,952	98.3	24	96.0	1,709	96.2	43	68.3	1,304	94.8	40	85.1
Addresses not successfully contacted	89	2.4	34	1.7	1	4.0	68	4.0	20	31.7	71	5.2	7	14.9
Successfully contacted addresses	3,658	100.0	1,952	100.0	24	100.0	1,709	100.0	43	100.0	1,304	100.0	40	100.0
Household questionnaire completed	1,986	54.3	1,693	86.7	14	58.3	1,491	87.2	28	65.1	1,076	82.5	27	67.5
Refusal to co-operate	932	25.5	193	9.9	2	8.3	159	9.3	8	18.6	177	13.6	7	17.5
Entire household away for the duration of fieldwork	551	15.1	55	2.8	7	29.2	48	2.8	7	16.3	45	3.5	6	15.0
household unable to respond	48	1.3	10	0.5	0	0.0	11	0.6	0	0.0	6	0.5	0	0.0
Other reasons	141	3.9	1	0.1	1	4.2	0	0.0	0	0.0	0	0.0	0	0.0
Successful household questionnaire	1,986	100.0	1,693	100.0	14	100.0	1,491	100.0	28	100.0	1,076	100.0	27	100.0
Interview accepted for database	1,986	100.0	1,693	100.0	14	100.0	1,491	100.0	28	100.0	1,076	100.0	27	100.0
Interview rejected	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

2.1.5. Sample selection scheme

As described in the sections 2.1.1. and 2.1.3. the addresses of the first wave of the longitudinal component (R1/05) were selected with a simple random sampling design.

2.1.6. Sample distribution over the time

In 2005, the fieldwork period started on April 21st and ended on November 30th and was carried out by an Austrian fieldwork institute. Compared to the recommendations given in the document EU-SILC 065 - the interval between the income reference period and the date of the interview - Austria extended this interval by 3 months due to difficulties in gathering the sufficient number of interviews in time. In 2006 the fieldwork period of the operation of EU-SILC 2006 started in April and was extended until September conducted by the same fieldwork institute as 2005. The fieldwork of EU-SILC 2007 started earlier in the middle of March, and was concluded during the second half of September. The fieldwork for the EU-SILC 2008 operation started in May 2008 and ended in September 2008.

Table 4 : Number of successful interviews by date of interview (R1/05)

	2005	2006	2007	2008	Total
March			133		133
April	61	359	296		716
May	232	516	221	204	1,173
June	230	402	238	455	1,325
July	238	287	359	216	1,100
August	230	103	209	164	706
September	65	40	63	64	232
October	344				344
November	586				586
Total	1,986	1,707	1,519	1,103	6,315

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

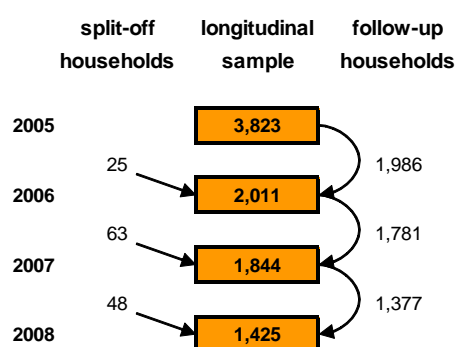
2.1.7. Renewal of the sample: rotational groups

The year 2004 was the initial year of the rotational survey design. A new sample was drawn and the rotational groups were determined by a random selection process that ensured the required minimum size of the rotational groups during the following years.

During the years 2005 to 2008 the number of households belonging to the panel Rotation R1/05 changed considerably. On the one hand households left the panel due to reasons such as refusal of cooperation or absence during the fieldwork period. On the other hand new households joined the panel when a sample person moved out and formed a new household (split-household).

If a household couldn't take part in the survey in 2006 but was successfully enumerated in the following year (returnee), it was treated as a follow-up household. This strategy was discontinued in 2008, because returnees are difficult to follow-up and the size of the follow-up sample of 2008 had to be reduced. The sample became too big, because during the first years of the panel survey the response-rates turned out to be lower than expected and, consequently, the first wave samples had to be enlarged. Because of higher response-rates in 2006 and 2007 more households than necessary were available for follow-up in EU-SILC 2008 and the follow-up sample 2008 could be reduced⁴ to the initially planned sample size. The following figure describes the development of the four-year panel rotation R1/05.

Figure 2: Development of the sample over the time (R1/05)⁵



2.1.8. Weighting⁶

The longitudinal data set for individuals in EU SILC 2008 contains information on the eligible individuals traced from original sample households in EU SILC 2005, EU-SILC 2006 or EU-SILC 2007.

⁴ Compare: Intermediate quality report 2008 ch. 2.1.3

⁵ The first wave sample consists of addresses. The actual number of households is usually smaller, as some addresses are ineligible.

⁶ Weighting procedures for the EU-SILC cross-sectional component can be found in the intermediate quality report of the Austrian EU-SILC operation 2008.

This data structure allows for three analytic perspectives:

- A longitudinal population of individuals who were in the target population for all four years (2005 to 2008)
- A longitudinal population of individuals who were in the target population for the last three years (2006 to 2008).
- A longitudinal population of individuals who were in the target population for the last two years (2007 & 2008).

For each perspective different weights are required according to the EUROSTAT document EU-SILC 065 of the 2008 operation. Common starting point of the longitudinal weights RB062 for the two-year panel, RB063 for the three-year panel and RB064 for the four-year panel is the base weight RB060. From the latter also the cross-sectional weight RB050 had been derived.

The procedure described below sets out from the design weights of the household sample in 2005 and their adjustments due to non-response in the initial sample. These weights are then adjusted for each individual by the inverse propensity to stay in the panel, whereby response probabilities are estimated using a logistic regression model. Individuals, who entered the survey either as co-residents or as newborns, have no base weight from a previous year. In line with EUROSTAT's recommendations newborns are assigned their mothers' base weight or, if the mother cannot be found, the average of base weights in the household. Other co-residents receive a base weight of zero. (cf. EU-SILC Intermediate Quality Report 2008, ch. 2.1.8.2.).

2.1.8.1. Design factor

The longitudinal component of EU-SILC started with the sample of the EU-SILC 2005 survey, where households were selected by simple random sampling. Each household has the same inclusion probability and the design weight is given by the total number of households in the sampling frame divided by the number of selected addresses.

2.1.8.2. Non-response adjustment – first wave

The aim of non-response weights is the reduction of the bias caused by unit non-response on household level for the first wave and for attrition among individuals for the follow-up waves. The correction of this bias ideally requires knowledge on the response probability of each of the responding households. Each record in the dataset is then re-weighted by the inverse of this probability.

The estimation strategy applied for the first wave households by Statistics Austria divides the sample into classes and computes the empirical response rate for each of these classes, using design weights. This empirical response rate then serves as an estimate for the response probability of all households of the respective class. This estimation strategy assumes that the response probability is the same for all households of the class.

The classes were defined by cross-tabulating the variables DB040 (region, Nuts 2 level) and DB100 (degree of urbanisation). The first variable has 9 categories, according to Austria's nine federal provinces (*Bundesländer*), and the second variable has 3 categories, so finally 24 classes⁷ were built. A more refined non-response analysis has only been established in more recent waves. Coherence of survey data and registers is not optimal because of changes between sampling and fieldwork but also because living reality and register reality may be different. Therefore non-response adjustment for the first wave of the survey is restricted to basic information on household level⁸.

The design weights adjusted for non-response in the 2005 survey provide the basis for the further adjustments of the longitudinal component.

2.1.8.3. Adjustment to external data – first wave

External adjustments are done to improve the consistency of estimations with reliable external sources. This step is also documented in the respective intermediate quality report for EU-SILC 2005.

The reference data source for calibration was the Microcensus, a quarterly household survey with a sample of more than 23,000 randomly selected households. The period of the EU-SILC fieldwork was extended in 2005, from March to end of November. As a reference data base the annual average of the Microcensus 2005 was chosen. The Microcensus operates with a rotational design like EU-SILC. It incorporates the Labour Force

⁷ For Vienna, the capital of Austria, there is no intermediate or thinly populated areas and for Burgenland there are no densely populated areas.

⁸ The population register has only been set up in 2003 as a sampling frame and is subject to revision.

Survey, and due to the size of the sample it is also the most important reference for the socio-demographic structure of private households in Austria.

The adjustments were done on the basis of the product of the design weights and the non-response weights. A calibration was applied to all rotations together. The calibration was carried out simultaneously on household and on individual level and with reference to the following variables:

Household level:

- household size (four categories: 1, 2, 3 household members and households with 4 and more household members),
- tenure status (two categories: rented flat/house or owned),
- region (nine categories: Nuts 2 level).

Individual level:

- Sex
- age (younger than 15 yrs., 15 to 19 yrs., 5 yr. age groups between 20 and 74 and 75 and older)

The variables for calibration were chosen in conformity with the EUROSTAT proposal in doc EU-SILC 65/05. An "integrative" calibration design was applied with the target that on individual level every person of the household should be assigned the same weight. The individual characteristics were aggregated on household level, and dummy variables were constructed for every parameter of the individual adjustment characteristics.

In 2005 the SAS macro "CALMAR" which was developed by INSEE was applied to calculate calibrated weights.

2.1.8.4. Final longitudinal weights – first wave

A final correction of individual non-response within a household was not necessary because the small number of missing cases were imputed completely. In the first wave, the personal longitudinal base weights (RB60) are the weights resulting from the design-weights after non-response adjustment and calibration.

2.1.8.5. Non-response adjustments – subsequent waves

For the second, third and fourth wave households, their base weights correspond to the design weights in 2005 adjusted for non-response and calibrated for external marginal distributions. Given that longitudinal households are difficult to define, weighting for attrition is based on individual attrition propensities.

In 2008 it was necessary to reduce the sample size of the follow-up households. Therefore, the base weights of the fourth wave (in the year 2008) had to compensate for the reduction of the number of follow-up households. The base weights from 2007 of persons in households that were followed-up in 2008 had to be rescaled. Especially the weights of persons in households that were never at-risk-of-poverty during the previous years had to be enlarged because these households were not followed-up completely. This strategy assured that the reduction of the follow-up sample did not reduce the sum of base weights. (A more detailed description of the reduction of follow-up households in EU-SILC 2008 can be found in the Austrian EU-SILC Intermediate Quality Report 2008, ch. 2.1.3 and ch. 2.18.)

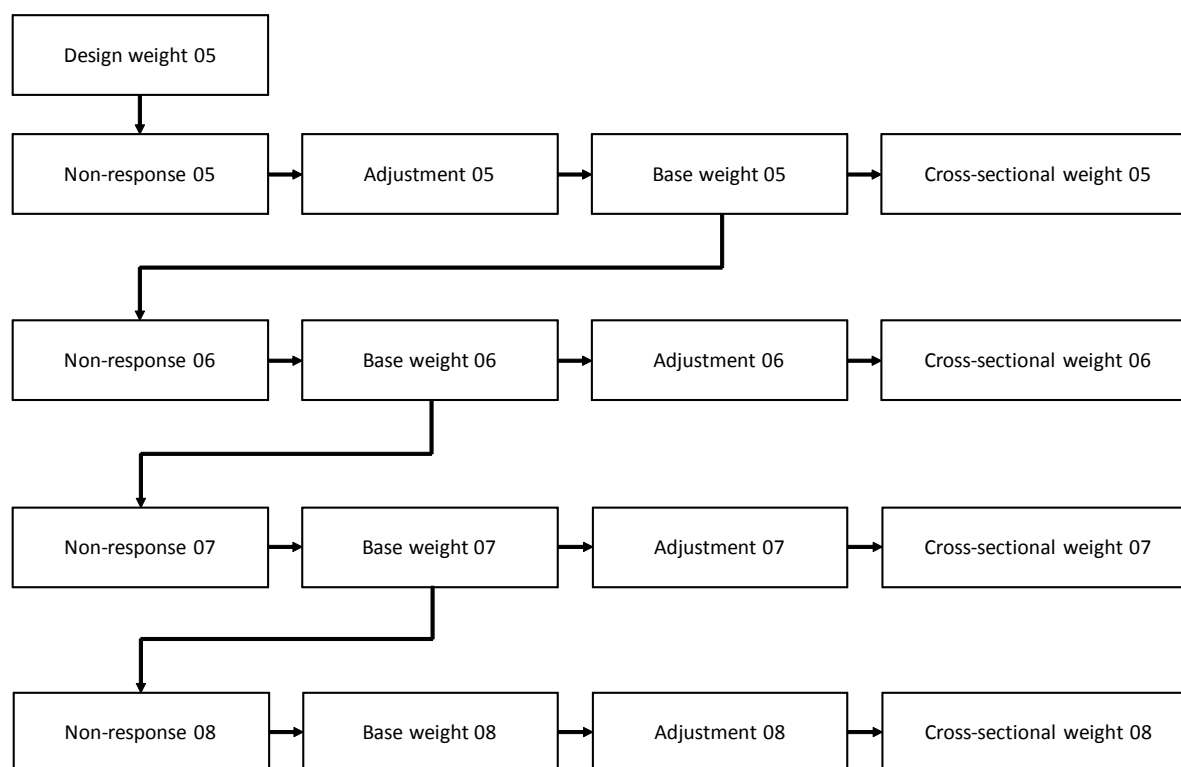
For the non-response adjustment for respondents followed up in the second, third and fourth wave, more information is available from the household and personal interviews of the first wave. Therefore the response probability of each person was estimated on the basis of a logistic regression model. In the first step a set of significant variables between participation and non-participation in the second wave was selected. Significance was tested with t-test and Chi-Square. Variables with a correlation with income (main variable of interest) were selected into the model. The non-response model is identical to the non-response model of the cross-sectional component and has been described in detail in the relevant intermediate quality reports.⁹

Design weights and non-response weights are multiplied to obtain the personal base weight (RB060) for the subsequent wave. This product is not defined for individuals who were newly born between 2005 and 2008. They receive their mother's weight or, alternatively the average weight of sample persons in the household. In principle new entrants from outside the target population should be treated analogously. In absence of the required information of their former population status all other co-residents are assigned zero base weights.

Figure 3 gives an overview of the weighting procedure described so far.

⁹ Compare: intermediate quality report 2006 ch. 2.1.8 & intermediate quality report 2007 ch. 2.1.8

Figure 3: Longitudinal weighting scheme EU-SILC



2.1.8.6. Further adjustments to external data

The base weights described in section 2.1.8.5 were used to produce longitudinal weights for the two year panel 2007-2008 (RB062), for the three year panel 2006-2008 (RB063) and for the four-year panel 2005-2008 (RB064). In order to establish coherence between the cross-section of EU-SILC 2008 and the last year of the longitudinal panels, the longitudinal weights were calibrated with a procedure similar to the one described in section 2.1.8.3.

Longitudinal analysis of EU-SILC 2008 Data has shown remarkable inconsistencies between cross-sectional and longitudinal results. The at-risk-of-poverty rate estimated upon cross-sectional data was 12.4 % whereas estimates for the panel population (using the same at-risk-of-poverty threshold) were 11.1% for the two year panel, 10.8% for the three year panel and 9.0% for the four-year panel. While each referring to a different panel population these figures all refer to the income situation observed in the EU-SILC operation 2008.

Conceptually, the panel and cross-sectional populations differ only by the population of migrants and newborns. For example, in the case of the two year panel, individuals born or migrated in 2008 contribute to the cross-sectional estimates but cannot be reflected in the panel data.

According to Austrian migration and birth statistics for the year 2008 the population not covered by the four-year panel would comprise a total of around 500.000 persons or roughly 6% of the population in 2008.

The observed difference of about 3 percentage points between the estimates for the population below the at-risk-of-poverty-threshold in the four-year panel and cross-sectional data would imply that half of the population not covered by the four-year panel is at-risk-of-poverty. This assumption is highly implausible. Empirically, about 21% of all sample members and co-residents with new-borns and migrants of the years 2006-2008 living in their households have an income below the at-risk-of-poverty threshold. Hence, the higher prevalence of poverty risks among the population which is not covered in the panel may perhaps explain a difference of 0.6 percentage points for each year.

This indicates a bias due to systematic panel attrition and needs adjustment. The calibration method aims to obtain weights which establish coherence between cross-sectional and longitudinal poverty estimates and population structure for 2008, the final year of the panel.

For each of the longitudinal weights RB06i ($i \in [2;3;4]$) a new sample was constructed comprising:

- Records from the longitudinal sample which have positive weights (i.e. where $RB06i > 0$, for a panel with a duration of i years)
- Newborns from the longitudinal sample ((i.e. where $RB06i = 0$, for a panel with a duration of i years). Their weight is replaced by the base weight RB060.

- Records from the cross-sectional sample which entered the frame population in the period¹⁰ after the first year of the respective panel with their cross-sectional weight (RB050).

If only records of 2008 are taken into account, this reconstructed cross-sectional dataset should be consistent with the cross-sectional dataset of EU-SILC 2008. It contains groups of people who can be present in the cross-section of 2008 and the longitudinal dataset 2005-2008 and also persons who are only part of the cross-sectional dataset 2008. However, there still remain the above described inconsistencies regarding the major social indicator of EU-SILC, namely the at-risk-of-poverty-indicator.

These inconsistencies can occur because of:

- Sampling Errors
- Systematic panel attrition
- Measurement errors in a repeated survey

In order to establish coherence the base weights of the reconstructed cross-section were adjusted to distributions of the cross-sectional dataset of EU-SILC 2008.

The adjustments were applied on individual level on the basis of the variables listed under 2.1.8.3. For age, modified categories were used and some other variables on individual level were added to the adjustment process. Altogether, the following variables based on external data were used:

Household level:

- household size (four categories: 1, 2, 3 household members and households with 4 and more household members),
- tenure status (two categories: rented flat/house or owned),
- region (nine categories: Nuts 2 level).

Individual level:

- Sex
- age (younger than 15 yrs., 15 to 34 years, 35 to 64 years, 65 years and older)
- Citizenship Austria or foreign country
- Income below the median equivalised income
- Income below 60% of median equivalised income (individuals at-risk-of-poverty)
- Individuals belonging to the population not covered in the panel (migrants and new borns)
- Beneficiaries of unemployment benefits for a duration of more than one month (data from the association of the national social-security insurances, "Hauptverband der österreichischen Sozialversicherungsträger" are used)

After the calibration using the SAS macro "CALMAR" people not part of the longitudinal panel were removed from the reconstructed cross-sectional dataset and newborns from the longitudinal sample received a longitudinal weight RB06i ($i \in [2;3;4]$) of zero. The new longitudinal dataset is only filled for persons belonging to the respective panels, but is also consistent with the cross-sectional data of 2008.

2.1.8.7. Final longitudinal weight

Individuals entering the population after the start of a panel study cannot be represented in the panel population. This part of the target population is called "IN-Population".

The panel which started in 2005, i.e. R1/05 forms a four-year panel. The appropriate weight is RB064 which is defined for all individuals present throughout this period excluding newborns and co-residents. RB064 before

¹⁰ Since the corresponding information from the population register can presently not be matched directly to the individuals concerned this can only be approximated and all individuals in a household with a new member of the frame population are considered.

calibration is identical to RB060 apart from a scaling factor. For RB062 and RB063 the longitudinal weights require some adjustment which is applied for the calibration.

The four-year panel incorporates also a three year panel and a two-year panel. When the three-year panel of Rotation R1/05 is combined with the three-year panel which was launched in the year 2006 (R2/06), a small part of the population is only represented in this latter part. This can be referred to as "IN-Population" and consists mostly of migrants of the year 2006. Their weights need to be inflated accordingly to give an unbiased representation of the population in scope during the years 2006-2008. In accordance with the EUROSTAT document 065/05.1 (section V. of the chapter on weighting) an inflation factor of 2 should be chosen for the longitudinal weights RB063 of the IN-Population, since these persons couldn't be represented in rotation R1/05 of the three year panel which consists of two rotations (R1/05 & R2/06). The same procedure was applied to the two-year panel 2007 to 2008 which consists of the rotation R1/05, R2/06 and R3/07. A small fraction of the persons of rotation R2/06 and R3/07 belong to the IN-Population described above. The weights of these persons should be inflated by the factor 3/2 (if they entered the target population in 2006) or a factor of 3 (if they entered the target population in 2007) ¹¹.

2.1.8.8. Final cross-sectional weight

Final cross-sectional weights of EU-SILC are obtained by a calibration of the joint cross-sectional and longitudinal sample following the procedure described in 2.1.8.3. The adjustments were carried out on household level and on individual level. A final correction of individual non-response within a household was not necessary because after imputing the missing cases, there was no individual non-response.

2.1.9. Substitutions

Substitutions were necessary only in the initial cross-sectional sample of the year 2005 and are described in detail in the relevant Intermediate Quality Report for the EU-SILC 2005 operation (compare: Austrian intermediate quality report 2005, ch. 2.1.9).

2.2. Sampling errors

The subsequent tables present means, number of observations and standard errors for each wave of the longitudinal component and the cross-sectional component in the year 2008.

¹¹ Currently the population status of individuals can only be determined with a certain propensity for all household members. Register data from the original sample is used to determine whether a household contains individuals who entered the population after the previous sample had been drawn, i.e. who were not in the sampling frame in t-1. Since no unique matching on the individual level is possible, the weights of all members living in such households have to be inflated by the same factor, proportional to the share of new entrants in the household.

Table 5 : Mean, total number of observations (before and after imputation) and standard error for income components 2005 (households & persons, weighted mean, R1/05)

	Mean	Number of observations		Standard error
		Before imputation	After imputation	
Total household gross income	43,237	817	1,986	748
Total disposable household income	31,960	1,237	1,986	507
Total disposable household income before social transfers other than old-age and survivors' benefits	29,463	1,232	1,957	501
Total disposable household income before social transfers including old-age and survivors' benefits	23,756	1,189	1,869	545
<i>Net income components at household level</i>				
Income from rental of a property or land	9,100	58	83	1,593
Family/child related allowances	4,679	673	675	128
Social exclusion not elsewhere classified	2,891	33	39	555
Housing allowances	1,399	75	79	99
Regular inter-household cash transfer received	3,995	118	127	365
Interest, dividends, profit from capital investments	355	1,055	1,530	53
Income received by people aged under 16	2,353	13	16	578
Regular inter-household cash transfer paid	3,826	148	156	342
Repayments/receipts for tax adjustment	-223	840	847	54
<i>Gross income components at household level</i>				
Income from rental of a property or land	12,613	32	83	2,264
Family/child related allowances	4,679	673	675	128
Social exclusion not elsewhere classified	2,891	33	39	555
Housing allowances	1,399	75	79	99
Regular inter-household cash transfer received	3,995	118	127	365
Interest repayments on mortgage	444	1,055	1,530	66
Income received by people aged under 16	2,840	13	16	722
Regular inter-household cash transfer paid	3,826	148	156	342
Tax on Income and Social Contributions	11,099	806	1,961	267
<i>Net income components at personal level</i>				
Employee cash or near cash income	17,586	1,888	2,144	260
Contributions to individual private pension plans	1,098	892	931	48
Cash benefits or losses from self-employment	15,485	243	363	1,029
Value of goods produced by own-consumption	958	70	71	270
Pension from individual private plans	3,536	18	19	996
Unemployment benefits	4,172	233	256	231
Old-age benefits	15,266	805	890	339
Survivors' benefits	8,375	39	42	825
Sickness benefits	2,878	55	71	446
Disability benefits	12,135	119	126	640
Education-related allowances	3,568	52	52	750
<i>Gross income components at personal level</i>				
Employee cash or near cash income	25,073	1,405	2,144	425
Contributions to individual private pension plans	1,098	892	931	48
Cash benefits or losses from self-employment	21,481	151	363	1,446
Value of goods produced by own-consumption	958	70	71	270
Pension from individual private plans	4,195	7	19	1,488
Unemployment benefits	4,242	231	256	247
Old-age benefits	18,869	410	890	494
Survivors' benefits	10,412	16	42	1,065
Sickness benefits	3,563	34	71	605
Disability benefits	14,346	62	126	874
Education-related allowances	3,568	52	52	750

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Weighted by db090 at household level and pb050 at personal level

Table 6 : Mean, total number of observations (before and after imputation) and standard error for income components 2006 (households & persons, weighted mean, R1/05)

	Mean	Number of observations		Standard error
		Before imputation	After imputation	
Total household gross income	43,174	597	1,707	830
Total disposable household income	32,320	1,044	1,707	578
Total disposable household income before social transfers other than old-age and survivors' benefits	29,717	1,031	1,676	557
Total disposable household income before social transfers including old-age and survivors' benefits	23,954	991	1,580	619
<i>Net income components at household level</i>				
Income from rental of a property or land	9,190	51	63	1,758
Family/child related allowances	4,650	576	577	156
Social exclusion not elsewhere classified	4,406	33	37	1,628
Housing allowances	1,391	56	57	133
Regular inter-household cash transfer received	5,647	116	117	777
Interest, dividends, profit from capital investments	367	865	1,298	42
Income received by people aged under 16	1,913	6	7	552
Regular inter-household cash transfer paid	3,903	105	110	337
Repayments/receipts for tax adjustment	-327	716	740	45
<i>Gross income components at household level</i>				
Income from rental of a property or land	8,452	32	63	1,830
Family/child related allowances	4,650	576	577	156
Social exclusion not elsewhere classified	4,406	33	37	1,628
Housing allowances	1,391	56	57	133
Regular inter-household cash transfer received	5,647	116	117	777
Interest repayments on mortgage	459	865	1,298	53
Income received by people aged under 16	1,985	5	7	546
Regular inter-household cash transfer paid	3,903	105	110	337
Tax on Income and Social Contributions	10,867	603	1,673	320
<i>Net income components at personal level</i>				
Employee cash or near cash income	18,338	1,529	1,740	320
Contributions to individual private pension plans	1,114	734	779	50
Cash benefits or losses from self-employment	14,630	253	300	1,086
Value of goods produced by own-consumption	242	63	75	43
Pension from individual private plans	4,513	9	10	2,685
Unemployment benefits	4,540	206	227	246
Old-age benefits	15,376	750	842	277
Survivors' benefits	8,318	32	35	743
Sickness benefits	3,781	31	44	1,231
Disability benefits	12,032	106	109	806
Education-related allowances	3,457	30	35	635
<i>Gross income components at personal level</i>				
Employee cash or near cash income	26,323	1,046	1,740	528
Contributions to individual private pension plans	1,114	734	779	50
Cash benefits or losses from self-employment	19,798	146	300	1,461
Value of goods produced by own-consumption	242	63	75	43
Pension from individual private plans	5,433	3	10	3,592
Unemployment benefits	4,631	200	227	266
Old-age benefits	18,832	363	842	405
Survivors' benefits	10,368	13	35	983
Sickness benefits	4,517	10	44	1,329
Disability benefits	14,233	58	109	1,137
Education-related allowances	3,457	30	35	635

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Weighted by db090 at household level and pb050 at personal level

Table 7 : Mean, total number of observations (before and after imputation) and standard error for income components 2007 (households & persons, weighted mean, R1/05)

	Mean	Number of observations		Standard error
		Before imputation	After imputation	
Total household gross income	44,082	413	1,519	883
Total disposable household income	32,800	915	1,519	584
Total disposable household income before social transfers other than old-age and survivors' benefits	30,373	916	1,499	577
Total disposable household income before social transfers including old-age and survivors' benefits	24,364	863	1,398	656
<i>Net income components at household level</i>				
Income from rental of a property or land	7,810	51	52	1,646
Family/child related allowances	4,642	520	524	144
Social exclusion not elsewhere classified	3,550	33	34	820
Housing allowances	1,528	54	56	126
Regular inter-household cash transfer received	4,391	104	109	443
Interest, dividends, profit from capital investments	562	780	1,132	82
Income received by people aged under 16	1,696	11	12	464
Regular inter-household cash transfer paid	3,792	89	100	355
Repayments/receipts for tax adjustment	-292	659	670	79
<i>Gross income components at household level</i>				
Income from rental of a property or land	8,860	0	52	2,002
Family/child related allowances	4,642	513	524	144
Social exclusion not elsewhere classified	3,550	33	34	820
Housing allowances	1,528	54	56	126
Regular inter-household cash transfer received	4,391	104	109	443
Interest repayments on mortgage	702	780	1,132	102
Income received by people aged under 16	1,836	7	12	474
Regular inter-household cash transfer paid	3,792	89	100	355
Tax on Income and Social Contributions	11,236	446	1,498	343
<i>Net income components at personal level</i>				
Employee cash or near cash income	18,322	1,463	1,612	329
Contributions to individual private pension plans	1,028	675	720	47
Cash benefits or losses from self-employment	14,832	247	277	1,128
Value of goods produced by own-consumption	552	86	98	143
Pension from individual private plans	3,731	10	10	1,280
Unemployment benefits	4,088	175	187	283
Old-age benefits	15,860	699	774	314
Survivors' benefits	6,772	27	28	745
Sickness benefits	2,147	38	42	383
Disability benefits	12,388	92	96	769
Education-related allowances	2,043	33	35	356
<i>Gross income components at personal level</i>				
Employee cash or near cash income	26,425	893	1,612	556
Contributions to individual private pension plans	1,028	675	720	47
Cash benefits or losses from self-employment	20,008	8	277	1,826
Value of goods produced by own-consumption	552	86	98	143
Pension from individual private plans	3,808	6	10	1,321
Unemployment benefits	4,132	171	187	293
Old-age benefits	19,457	320	774	472
Survivors' benefits	8,368	11	28	985
Sickness benefits	3,163	13	42	587
Disability benefits	14,399	47	96	1,006
Education-related allowances	2,043	33	35	356

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Weighted by db090 at household level and pb050 at personal level

Table 8 : Mean, total number of observations (before and after imputation) and standard error for income components 2008 (households & persons, weighted mean, R1/05)

	Mean	Number of observations		Standard error
		Before imputation	After imputation	
Total household gross income*	48,436	369	1,102	1,244
Total disposable household income*	34,949	759	1,102	826
Total disposable household income before social transfers other than old-age and survivors' benefits	32,284	762	1,092	811
Total disposable household income before social transfers including old-age and survivors' benefits	25,530	747	1,044	857
<i>Net income components at household level</i>				
Income from rental of a property or land	13,829	57	58	5,747
Family/child related allowances	4,858	392	395	196
Social exclusion not elsewhere classified	578	53	55	153
Housing allowances	1,390	46	48	134
Regular inter-household cash transfer received	4,565	80	82	553
Interest, dividends, profit from capital investments	738	781	896	78
Income received by people aged under 16	4,109	26	27	950
Regular inter-household cash transfer paid	3,859	109	112	405
Repayments/receipts for tax adjustment	-231	566	578	65
<i>Gross income components at household level</i>				
Income from rental of a property or land	14,766	0	58	5,785
Family/child related allowances	4,858	392	395	196
Social exclusion not elsewhere classified	578	53	55	153
Housing allowances	1,390	46	48	134
Regular inter-household cash transfer received	4,565	80	82	553
Interest repayments on mortgage	923	781	896	97
Income received by people aged under 16	4,534	16	27	1,012
Regular inter-household cash transfer paid	3,859	109	112	405
Tax on Income and Social Contributions	13,174	420	1,094	573
<i>Net income components at personal level</i>				
Employee cash or near cash income	19,041	955	1,166	431
Contributions to individual private pension plans	1,238	548	580	97
Cash benefits or losses from self-employment	13,555	209	233	1,089
Value of goods produced by own-consumption	598	74	77	86
Pension from individual private plans	5,416	11	12	2,223
Unemployment benefits	4,316	133	143	519
Old-age benefits	16,062	562	622	362
Survivors' benefits	5,267	28	29	670
Sickness benefits	2,451	57	63	551
Disability benefits	11,130	64	65	899
Education-related allowances	2,041	41	44	433
<i>Gross income components at personal level</i>				
Employee cash or near cash income	27,894	686	1,166	711
Contributions to individual private pension plans	1,238	548	580	97
Cash benefits or losses from self-employment	20,888	6	233	2,515
Value of goods produced by own-consumption	598	74	77	86
Pension from individual private plans	5,807	7	12	2,260
Unemployment benefits	4,396	130	143	538
Old-age benefits	20,652	313	622	534
Survivors' benefits	6,707	8	29	867
Sickness benefits	3,134	27	63	702
Disability benefits	13,709	36	65	1,189
Education-related allowances	2,041	41	44	433

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Weighted by db090 at household level and pb050 at personal level

*For one household all income components were recorded as zero and therefore the household was excluded from the table.

Table 9 : Mean, total number of observations (before and after imputation) and standard error for income components of the cross-sectional component 2008 (households & persons, weighted)

	Mean	Number of observations		Standard error
		Before imputation	After imputation	
Total household gross income	46,798	1998	5710	563
Total disposable household income	33,988	3922	5710	365
Total disposable household income before social transfers other than old-age and survivors' benefits	31,208	3921	5649	364
Total disposable household income including old-age and survivors' benefits	24,705	3775	5346	394
<i>Net income components at household level</i>				
Income from rental of a property or land	10,502	298	305	1457
Family/child related allowances	4,935	2042	2052	80
Social exclusion not elsewhere classified	1,559	259	262	216
Housing allowances	1,622	283	292	82
Regular inter-household cash transfer received	4,245	487	501	233
Interest, dividends, profit from capital investments	703	3722	4301	44
Income received by people aged under 16	3,275	106	121	429
Regular inter-household cash transfer paid	3,867	549	564	182
Repayments/receipts for tax adjustment	-317	2778	2820	33
<i>Gross income components at household level</i>				
Income from rental of a property or land	12,006	0	305	1537
Family/child related allowances	4,935	2042	2052	80
Social exclusion not elsewhere classified	1,559	259	262	216
Housing allowances	1,622	283	292	82
Regular inter-household cash transfer received	4,245	487	501	233
Interest repayments on mortgage	878	3722	4301	55
Income received by people aged under 16	3,999	81	121	583
Regular inter-household cash transfer paid	3,867	549	564	182
Tax on Income and Social Contributions	12,644	2279	5632	234
<i>Net income components at personal level</i>				
Employee cash or near cash income	18,275	4818	5856	229
Contributions to individual private pension plans	1,101	2503	2706	31
Cash benefits or losses from self-employment	13,751	1056	1159	534
Value of goods produced by own-consumption	562	335	353	49
Pension from individual private plans	8,066	41	47	1405
Unemployment benefits	4,300	674	718	180
Old-age benefits	15,987	2558	2839	184
Survivors' benefits	7,041	114	118	491
Sickness benefits	2,468	267	308	188
Disability benefits	11,177	282	301	388
Education-related allowances	2,048	182	201	206
<i>Gross income components at personal level</i>				
Employee cash or near cash income	26,585	3495	5856	386
Contributions to individual private pension plans	1,101	2503	2706	31
Cash benefits or losses from self-employment	20,181	23	1159	878
Value of goods produced by own-consumption	562	335	353	49
Pension from individual private plans	8,461	25	47	1435
Unemployment benefits	4,363	666	718	187
Old-age benefits	20,637	1443	2839	275
Survivors' benefits	9,136	40	118	655
Sickness benefits	3,177	127	308	247
Disability benefits	13,605	178	301	501
Education-related allowances	2,048	182	201	206

Source: Statistics Austria, EU-SILC cross-sectional sample 2008.

Weighted by db090 at household level and pb040 at personal level

Table 10 : The mean, the number of observations (before and after imputations) and the standard error for the equalised disposable income 2005 (weighted, R1/05)

Equalised disposable income	Mean	Number of observations		Standard error	S.E. / Mean %
		Before imputation	After imputation		
<i>By household size</i>					
1 household member	18,658	393	570	481	2.6
2 household members	22,451	808	1,304	579	2.6
3 household members	21,040	591	1,005	594	2.8
4 and more household members	18,532	1,088	1,939	445	2.4
<i>By age groups</i>					
< 25	18,320	859	1,441	345	1.9
25 - 34	19,900	397	613	480	2.4
35 - 44	20,416	476	811	601	2.9
45 - 54	22,403	410	695	571	2.5
55 - 64	22,264	380	637	556	2.5
65 +	19,388	358	621	632	3.3
<i>By sex</i>					
Male	20,590	1,408	2,348	324	1.6
Female	19,619	1,472	2,470	269	1.4
Total	20,096	2,880	4,818	271	1.4

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Weighted by rb060

Table 11 : The mean, the number of observations (before and after imputations) and the standard error for the equalised disposable income 2006 (weighted, R1/05)

Equalised disposable income	Mean	Number of observations		Standard error	S.E. / Mean %
		Before imputation	After imputation		
<i>By household size</i>					
1 household member	18,970	343	496	516	2.7
2 household members	22,160	626	1,053	544	2.5
3 household members	22,882	519	881	797	3.5
4 and more household members	18,727	909	1,676	457	2.4
<i>By age groups</i>					
< 25	18,736	694	1,189	379	2.0
25 - 34	19,884	304	475	574	2.9
35 - 44	21,754	395	671	676	3.1
45 - 54	22,429	327	594	620	2.8
55 - 64	23,089	324	558	613	2.7
65 +	18,961	353	619	429	2.3
<i>By sex</i>					
Male	20,730	1,185	2,005	312	1.5
Female	20,317	1,212	2,101	325	1.6
Total	20,520	2,397	4,106	295	1.4

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Weighted by rb060

Table 12 : The mean, the number of observations (before and after imputations) and the standard error for the equivalised disposable income 2007 (weighted, R1/05)

Equivalised disposable income	Mean	Number of observations		Standard error	S.E. / Mean %
		Before imputation	After imputation		
<i>By household size</i>					
1 household member	19,207	304	434	516	2.7
2 household members	22,862	563	936	587	2.6
3 household members	22,588	446	771	771	3.4
4 and more household members	19,573	728	1,452	443	2.3
<i>By age groups</i>					
< 25	19,460	573	1,042	391	2.0
25 - 34	20,586	221	377	509	2.5
35 - 44	21,485	327	573	579	2.7
45 - 54	23,006	283	537	625	2.7
55 - 64	24,452	292	490	855	3.5
65 +	19,173	345	574	494	2.6
<i>By sex</i>					
Male	21,506	1,000	1,762	347	1.6
Female	20,591	1,041	1,831	296	1.4
Total	21,046	2,041	3,593	297	1.4

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Weighted by rb060

Table 13 : The mean, the number of observations (before and after imputations) and the standard error for the equivalised disposable income 2008 (weighted, R1/05)

Equivalised disposable income	Mean	Number of observations		Standard error	S.E. / Mean %
		Before imputation	After imputation		
<i>By household size</i>					
1 household member	19,721	245	306	875	4.4
2 household members	24,615	493	695	733	3.0
3 household members	24,059	322	513	793	3.3
4 and more household members	20,609	601	1,051	579	2.8
<i>By age groups</i>					
< 25	20,491	446	713	457	2.2
25 - 34	22,231	142	245	775	3.5
35 - 44	21,738	250	407	563	2.6
45 - 54	24,857	229	383	905	3.6
55 - 64	25,904	249	353	1,024	4.0
65 +	20,667	345	464	760	3.7
<i>By sex</i>					
Male	22,700	789	1,245	413	1.8
Female	21,859	872	1,320	415	1.9
Total	22,274	1,661	2,565	367	1.6

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Weighted by rb060

Table 14 : The mean, the number of observations (before and after imputations) and the standard error for the equivalised disposable income for the cross-sectional component 2008 (weighted)

Equivalised disposable income	Mean	Number of observations		Standard error	S.E. / Mean %
		Before imputation	After imputation		
<i>By household size</i>					
1 household member	19,672	1,359	1,764	326	1.7
2 household members	22,937	2,564	3,638	343	1.5
3 household members	22,224	1,692	2,676	395	1.8
4 and more household members	20,517	3,218	5,552	429	2.1
<i>By age groups</i>					
< 25	19,791	2,526	4,099	311	1.6
25 - 34	21,064	910	1,471	385	1.8
35 - 44	21,544	1,447	2,270	351	1.6
45 - 54	23,899	1,172	1,967	422	1.8
55 - 64	23,248	1,103	1,590	412	1.8
65 +	20,353	1,675	2,233	348	1.7
<i>By sex</i>					
Male	21,888	4,179	6,551	234	1.1
Female	20,817	4,654	7,079	217	1.0
Total	21,340	8,833	13,630	211	1.0

Source: Statistics Austria, EU-SILC cross-sectional sample 2008

Weighted by rb050

2.3. Non-sampling errors

2.3.1. Sampling frame and coverage errors

The sampling frame for the first wave of the longitudinal component (2005) was the ZMR. The ZMR is a continuously updated population register based on the registration of residence. The register is administered by the federal ministry of the Interior BMI (*Bundesministerium für Inneres*). Data from the ZMR are delivered quarterly to Statistics Austria. For the sampling procedure of EU-SILC 2005 the reference date of the ZMR was December 31st 2004. Addresses already selected for the EU-SILC 2003 or EU-SILC 2004 survey were excluded from the sample frame.

The ZMR can be expected to provide the most up-to-date representation of the resident population of Austria. Nonetheless the sample contained obsolete units at the time of the fieldwork, mainly due to changes that occurred after the sample had been drawn. These changes are for example persons who emigrated or died or persons who did not report changes of their main residence in time. Other units, such as newly built accommodations could not be included in the sampling frame.

The sampling frame was constructed from the ZMR data in quarterly intervals by aggregation of individuals to dwelling units. The entries of the ZMR comprise information on individuals and there is no key or link to identify all persons that are living in the same dwelling. So the connection of dwelling units has to be constructed by the individual address characteristics. The households constructed in this way are not always correct, mainly because of spelling errors or differences of the spelling of the addresses. However, the ZMR is regarded as the most reliable source for drawing representative samples and is also used in other surveys in Austria like the Microcensus (Labour Force Survey).

2.3.2. Measurement and processing errors

2.3.2.1. Measurement errors

Measurement errors are defined as the difference between the value of a variable (provided by the respondent) and the true but unknown value of a variable. These errors originate from four basic sources:

- the questionnaire (effects of the design, content and wording)
- the data collection method (effects of the modes of interviewing)
- the interviewer (effects of the interviewer on the response to a question including errors of the interviewer)
- the respondents (effects of the respondent on the interpretation of items)

The occurrence of these errors and their effects is almost unavoidable. However, Statistics Austria implemented various methods and procedures to reduce such effects and errors.

The original questionnaires were developed on the basis of the EU-SILC regulations and the EU-SILC doc 65 (*Description of Target Variables: Cross-sectional and Longitudinal*). They are annually adopted and revised according to changes of EUROSTATs requirements; feedback from interviewers or data checking procedures which indicated misinterpretations of particular items.

During the years 2005 to 2007 the data collection was primarily conducted using the CAPI technique (Computer Assisted Personal Interviewing). In a few exceptional cases, when requested by the household, telephone interviews (CATI - Computer Assisted Telephone Interviewing) were conducted during that period. In 2005 it was possible to expand the range of interview-checks on the surface of the input devices (laptop or handheld computer), so that errors, inconsistencies and incompatibilities within a household or within an interview could be clarified and fixed already during the interview. In 2007 a small sample of follow-up interviews was conducted by Statistics Austria instead of the fieldwork institute. The aim of this strategy was to assess the suitability of the CATI technique) for long and complex interviews as in EU-SILC. 273 of these CATI interviews were conducted in the four-year longitudinal rotation R1/05 of EU-SILC 2007. Differences between questionnaire implementations were kept as small as possible. However, some varieties like different answer categories for some questions and the usage of different programming tools for the questionnaire couldn't be avoided, but were expected to be too small to affect the interview results¹². In EU-SILC 2008 the entire fieldwork was taken over by Statistics Austria. Hence the CAPI programming had to be done anew by Statistics Austria. The CATI programming was adapted

¹² For a more detailed description of the CATI test see the Austrian intermediate quality report 2007, ch. 2.4.1.

from last years' testing of the CATI-technique. In rotation 1/05 764 persons were interviewed with CATI, 715 persons with CAPI and 666 personal interviews were carried out with a proxy.¹³

The questionnaire was up to 2007 only provided in German. To achieve higher response rates and understanding of migrant households, translations of the questionnaire in Turkish and Bosnian, Serbian and Croatian have been implemented in 2008. Native speaking CATI interviewers were available to conduct these interviews, but also CAPI interviewers could use the translation to solve problems in understanding specific questions for those respondents that have in general sufficient German language abilities by switching to the translation when needed.

To reduce interviewer effects it was necessary to provide the interviewers with sufficient training and support. These helped to ensure that all respondents were interviewed under similar conditions as far as the interviewer behaviour is concerned. During the years 2005-2007 the responsible fieldwork institute conducted the interviewer training in cooperation with the EU-SILC project team of Statistics Austria. In 2005 90 interviewers were trained, in 2006 121 interviewers¹⁴ attended the training sessions. In 2007 the fieldwork institute SPECTRA trained 66 interviewer (76 interviewer provided successful interviews)¹⁵, at Statistics Austria 137 CAPI interviewer and 13 CATI interviewer participated in the training sessions. Given that in 2008 Statistics Austria conducted the whole fieldwork, all interviews were carried out by Statistics Austria. Statistics Austria conducted one day long training sessions for CAPI interviewers that had not yet worked for the EU-SILC survey and half day training sessions for experienced EU-SILC CAPI interviewers. The short session concentrated on changes compared to the last survey and the module. Half day training sessions were also conducted with CATI interviewers. For the CAPI mode 158 interviewers collected information for the EU-SILC 2008 survey all over Austria. 46 telephone interviewers conducted follow-up CATI interviews.

Since proxy interviews are a possible source of bias, Statistics Austria and the fieldwork institute aimed at keeping the rate of proxy interviews low. Having learned from the experiences from the survey of 2005¹⁶, the fieldwork institute managed to reduce the ratio of proxy interviews from 20.2% in 2005 to 17.9% in the rotational group 1 in 2006¹⁷.

Table 15 below refers only to those persons interviewed in all four waves. In 2007 the rate of proxy interviews rose slightly (19.0%), whereas in 2008 it increased considerably to 30.8%. These 619 proxy interviews in 2008 were in 61% cases conducted with the CATI technique.

As in the last years, the ratio of proxy interviews varies considerably with the basic activity status of the respondent for whom a proxy interview had to be conducted. Retired and unemployed persons are more likely to give a personal interview (and/or are more accessible for interviews), than people in employment or self-employment.

¹³ Compare intermediate quality report 2007, p. 37.

¹⁴ 2 interviewers in 2005 and 15 interviewers in 2006 did not provide any successful interviews.

¹⁵ Ten interviewers of SPECTRA did not participate in the training sessions; these interviewers already interviewed for previous wave of EU-SILC.

¹⁶ The negative or problematic aspects of proxy interviews were also communicated in the interview trainings.

¹⁷ In the whole sample of EU-SILC 2006 the rate of proxy interviews was 19.6%.

Table 15 : Distribution of proxy interviews by activity status and year (persons interviewed in all four waves of R1/05)

	CAPI		CATI		Proxy Interview		Total	
	N	%	N	%	N	%	N	%
<i>2005</i>								
Working	751	73.6	27	2.6	243	23.8	1,021	100.0
Unemployed	57	89.1	1	1.6	6	9.4	64	100.0
Retired	490	85.7	17	3.0	65	11.4	572	100.0
Other	233	71.3	7	2.1	87	26.6	327	100.0
TOTAL	1,531	77.2	52	2.6	401	20.2	1,984	100.0
<i>2006</i>								
Working	806	79.3	10	1.0	201	19.8	1,017	100.0
Unemployed	44	83.0	0	0.0	9	17.0	53	100.0
Retired	536	88.9	2	0.3	65	10.8	603	100.0
Other	249	73.7	4	1.2	85	25.1	338	100.0
TOTAL	1,635	81.3	16	0.8	360	17.9	2,011	100.0
<i>2007</i>								
Working	669	64.5	142	13.7	226	21.8	1,037	100.0
Unemployed	53	85.5	2	3.2	7	11.3	62	100.0
Retired	464	73.8	91	14.5	74	11.8	629	100.0
Other	197	62.1	39	12.3	81	25.6	317	100.0
TOTAL	1,383	67.6	274	13.4	388	19.0	2,045	100.0
<i>2008</i>								
Working	299	29.5	380	37.5	333	32.9	1,012	100.0
Unemployed	24	44.4	16	29.6	14	25.9	54	100.0
Retired	252	38.9	256	39.5	140	21.6	648	100.0
Other	87	29.4	77	26.0	132	44.6	296	100.0
TOTAL	662	32.9	729	36.3	619	30.8	2,010	100.0

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Activity status = recoded variable pl030

2.3.2.2. Processing errors

As already during the fieldwork, checking of data quality is an important part of the post-data-collection editing process. Basic principles of this process are standardisation and transparency. Hence, all relevant tasks are included in a predefined process and data editing rules are generalized for subgroups to avoid single case solutions. Transparency of data changes is ensured by documentation such as programme code, copies of data files at various stages, flag variables for the collected variables and written documentations and descriptions.

Flags for collected Austrian income variables:

- 2 not applicable
- 1 no answer and not (yet) imputed
- 1 value according to survey
- 2 value from category imputation
- 3 value from net-gross or gross-net conversion
- 4 value logically deduced
- 5 value statistically imputed with longitudinal method
- 6 value statistically imputed with cross-sectional method
- 7 value from survey was corrected
- 8 value computed from a monthly income (this code applies only to variables of yearly income)

The data editing process consists of several checking procedures and the respective solutions:

- Assessment of unit and item non-response on household level: Households with too much lacking information are not included in the final database.

- Formal data checks (e.g. checking of completeness of data copies, correctness of routings, ranges of entered values): If required new data copies are made. Formal errors in the dataset are either corrected according to the formal requirements or in case of missing data labelled to be imputed later.
- Cross-sectional and longitudinal plausibility checks: Detected implausible values are either recoded, imputed or – for income variables – corrected through net-gross or gross-net conversion.

Imputation and weighting complete the data editing process.

With the final datasets on the macro-level the distribution of income variables and indicators are checked with various data sources (previous EU-SILC waves, ECHP, Microcensus, LFS, HBS, tax statistics and national accounts) to identify implausible distributions due to errors in the data editing process.

Before transmitting the longitudinal datasets to EUROSTAT the EUROSTAT SAS checking programmes were run to detect errors in the computation and coding of target variables. These require mostly formal corrections as at this point all checking and editing regarding content has already been implemented earlier in the editing process. Cases which are identified by the checking programme as probably implausible but are considered correct were commented and sent to EUROSTAT with the first data transmission.

2.3.3. Non-response errors

2.3.3.1. Achieved sample size

Table 16 : Sample size and accepted interviews (R1/05)

	2005	2006	2007	2008
Accepted household interviews	1,986	1,707	1,519	1,103
<i>Personal Interview accepted</i>				
Number of persons 16 years and older	3,904	3,380	3,020	2,183
Sample Persons	3,904	3,333	2,934	2,057
Co-residents	0	47	86	126

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

2.3.3.2. Unit non-reponse

Table 17 : Indicators of unit non-response (R1/05)

	2005
Address successfully contacted	3,658
Valid addresses selected	3,747
Ra - address contact rate %	97.6%
Number of household interviews completed and accepted for the database	1,986
Number of households at contacted address	3,658
Rh - proportion of completed interviews %	54.3%
NRh - HH non-response rate %	45.7%
Personal interviews completed	3,890
number of eligible individuals	3,904
Rp - individual response rate %	99.6%
NRp - individual non-response rate %	0.4%
Overall individual non-response rate *NRp %	47.2%

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Ra is the ratio of the number of addresses successfully completed to the number of valid addresses selected.

Rh is the ratio of the number of household interviews completed and accepted for the database to the number of eligible households at the contacted address.

Rp is the ratio of the number of personal interviews completed to the number of eligible individuals in the households whose interviews were completed and accepted.

*NRp is the overall individual non-response rate which is computed as follows: $*NRp \% = (1 - Ra * Rh * Rp) * 100$

Table 18 : Household response rate: Comparison of result codes between wave 2 and wave 1 (R1/05)

		Sample outcome in wave 2 - 2006											Total	
		DB130 = 11		DB120 = 22	DB130 = 22	DB130 = 23	DB130 = 24	DB130 = 21	DB120=21	NC	DB110 = 10	DB120 = 23		
Sample outcome in wave 1 - 2005		DB135 = 1	DB135 = 2											
2005	DB130 = 11	DB135 = 1	1,693	0	0	55	10	1	193	0	34	0	0	1,986
		DB135 = 2	0	0	0	0	0	0	0	0	0	0	0	0
	DB120 = 21													
	DB120 = 22													
	DB120 = 23													
	DB130 = 21													
	DB130 = 22													
	DB130 = 23													
	DB130 = 24													
	Total		1,693	0	0	55	10	1	193	0	34	0	0	1,986
New Households in wave 2 - 2005														
2006	DB110 = 8		14	0	0	7	0	1	2	1	NA	NA	0	25
	DB110 = 9		0	0	0	0	0	0	0	0	NA	NA	0	0
	Total		1,707	0	0	62	10	2	195	1	34	0	0	2,011

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

NC: Not contacted; db110 in (3,4,5,6,7,11)

Response rates for households wave 2 and wave 1 (R1/05):

wave response rate	0.849	Ratio of successfully interviewed households which were followed up from wave 1 to wave 2 to all followed up households in wave 2.
long follow up rate	0.886	Percentage of contacted households within the households received into wave 2 from wave 1, excluding those out of scope or non-
follow-up ratio	0.897	Number of contacted households in comparison to the number of households received for follow-up at wave 2 from wave 1.
achieved sample size ratio	0.860	Ratio of the number of households accepted for the database in wave 2 to the number of households accepted for the database in wave 1.

Table 19 : Household response rate: Comparison of result codes between wave 3 and wave 2 (R1/05)

		Sample outcome in wave 3 - 2007											Total	
		DB130 = 11		DB120 = 22	DB130 = 22	DB130 = 23	DB130 = 24	DB130 = 21	DB120=21	NC	DB110 = 10	DB120 = 23		
Sample outcome in wave 2 - 2005		DB135 = 1	DB135 = 2											
2006	DB130 = 11	DB135 = 1	1,461	0	0	35	8	0	137	1	62	0	3	1,707
		DB135 = 2	0	0	0	0	0	0	0	0	0	0	0	0
		DB120 = 22	0	0	0	0	0	0	0	0	0	0	0	0
		DB130 = 22	27	0	0	12	1	0	17	1	3	0	1	62
		DB130 = 23	3	0	0	0	2	0	4	0	1	0	0	10
		DB130 = 24	0	0	0	1	0	0	1	0	0	0	0	2
	Total	1,491	0	0	48	11	0	159	2	66	0	4	1,781	
New Households in wave 3 - 2006														
2007		DB110 = 8	28	0	0	7	0	0	8	20	NA	NA	0	63
		DB110 = 9	0	0	0	0	0	0	0	0	NA	NA	0	0
Total		1519	0	0	55	11	0	167	22	66	0	4	1844	

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

NC: Not contacted; db110 in (3,4,5,6,7,11)

Response rates for households wave 3 and wave 2 (R1/05):

w ave response rate	0.826	Ratio of successfully interviewed households which were followed up from wave 2 to wave 3 to all followed up households in wave 3.
long follow up rate	0.863	Percentage of contacted households within the households received into wave 3 from wave 2, excluding those out of scope or non-
follow -up ratio	0.883	Number of contacted households in comparison to the number of households received for follow -up at wave 3 from wave 2.
achieved sample size ratio	0.890	Ratio of the number of households accepted for the database in wave 3 to the number of households accepted for the database in wave 2.

Table 20 : Household response rate: Comparison of result codes between wave 4 and wave 3 (R1/05)

Sample outcome in wave 4 - 2008													Total	
DB130 = 11				DB120 = 22	DB130 = 22	DB130 = 23	DB130 = 24	DB130 = 21	DB120=21	NC	DB110 = 10	DB120 = 23		
Sample outcome in wave 3 - 2007														
		DB135 = 1	DB135 = 2											
2007	DB130 = 11	DB135 = 1	1,076	0	0	45	6	0	177	19	52	0	2	1,377
		DB135 = 2	0	0	0	0	0	0	0	0	0	0	0	0
		DB120 = 22	0	0	0	0	0	0	0	0	0	0	0	0
		DB130 = 22	0	0	0	0	0	0	0	0	0	0	0	0
		DB130 = 23	0	0	0	0	0	0	0	0	0	0	0	0
		DB130 = 24	0	0	0	0	0	0	0	0	0	0	0	0
		Total	1,076	0	0	45	6	0	177	19	52	0	2	1,377
New Households in wave 4 - 2007														
2008		DB110 = 8	27	0	0	6	0	0	7	7	NA	NA	1	48
		DB110 = 9	0	0	0	0	0	0	0	0	NA	NA	0	0
Total		1,103	0	0	51	6	0	184	26	52	0	3	1,425	

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

NC: Not contacted; db110 in (3,4,5,6,7,11)

Response rates for households wave 4 and wave 3 (R1/05):

w ave response rate	0.776	Ratio of successfully interviewed households which were followed up from wave 3 to wave 4 to all followed up households in wave 4.
long follow up rate	0.820	Percentage of contacted households within the households received into wave 4 from wave 3, excluding those out of scope or non-
follow -up ratio	0.844	Number of contacted households in comparison to the number of households received for follow -up at wave 4 from wave 3.
achieved sample size ratio	0.801	Ratio of the number of households accepted for the database in wave 4 to the number of households accepted for the database in wave 3.

Table 21 : Personal Interview outcome in wave 2 (R1/05)

		2006												
		Not completed because of												
		RB250 = 11,12,13	RB250=14 *							HHnc		Pn	PI	TOTAL
				RB250 = 21	RB250 = 22	RB250 = 23	RB250 = 31	RB250 = 32	RB250 = 33	HHnc1	HHnc2			
<i>Row</i>	<i>Sample persons forwarded from last wave</i>													
1	RB110 = 1-2	3246	15	0	0	0	0	0	0					3261
2	RB110 = 6													12
3	RB110 = -1													0
4	RB120 = 2													2
5	RB120 = 3													5
6	RB120 = 4													3
7	DB135 = 2 or -1, or DB110 = 7, or DB120 = 21-23 or -1, or DB130 == 21-24 or -1													0
8	DB110 = 3-6													0
<i>New Sample Persons</i>														
9	Reached age 16	55	1	0	0	0	0	0	0	0	0	0	0	56
10	Sample additions	0	0	0	0	0	0	0	0					0
<i>Non-Sample persons 16+</i>														
11	From wave 1 - 2005	0	0	0	0	0	0	0	0	0	0	0	0	0
	From wave 2 - 2006	46	1	0	0	0	0	0	0	0	0	0	0	47
<i>Sample persons not forwarded from last wave (excluded died or not eligible according to tracing rules)</i>														
13	From 2005													22
<i>Sum of Rows</i>														
	1+3+6+7+9+10	3301	16	0	0	0	0	0	0	0	0	0	0	3320
	1+3+6+7+9+10+13	3301	16	0	0	0	0	0	0	0	0	0	0	3342
	1+3+6+7+9+10+11	3347	17	0	0	0	0	0	0	0	0	0	0	3367

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

* Interviews not completed, though contact was made, data completed by imputation

Response rates for persons wave 2 and wave 1 (R1/05):

wave response rate of sample persons	0.994	achieved sample size ratio for sample persons	0.792
wave response rate of co-residents	n.a.	achieved sample size ratio for sample persons and coresidents	0.803
longitudinal follow-up rate	0.988	achieved sample size ratio for co-residents selected in previous wave	n.a.
R(RB250=14)	0.005	response rate for non-sample persons	0.979

Table 22 : Personal Interview outcome in wave 3 (R1/05)

		2007												
		Not completed because of												
		RB250 = 11,12,13	RB250=14 *							HHnc		Pn	PI	TOTAL
				RB250 = 21	RB250 = 22	RB250 = 23	RB250 = 31	RB250 = 32	RB250 = 33	HHnc1	HHnc2			
<i>Row</i>	<i>Sample persons forwarded from last wave</i>													
1	RB110 = 1-2	2802	5	0	0	0	0	0	0					2807
2	RB110 = 6													18
3	RB110 = -1													0
4	RB120 = 2													4
5	RB120 = 3													3
6	RB120 = 4													7
7	DB135 = 2 or -1, or DB110 = 7, or DB120 = 21-23 or -1, or DB130 == 21-24 or -1													0
8	DB110 = 3-6													0
<i>New Sample Persons</i>														
9	Reached age 16	45	1	0	0	0	0	0	0	0	0	0	0	46
10	Sample additions	0	0	0	0	0	0	0	0					0
<i>Non-Sample persons 16+</i>														
11	From wave 2 - 2006	33	0	0	0	0	0	0	0	0	0	0	0	33
	From wave 3 - 2007	53	0	0	0	0	0	0	0	0	0	0	0	53
<i>Sample persons not forwarded from last wave (excluded died or not eligible according to tracing rules)</i>														
13	From 2006													38
<i>Sum of Rows</i>														
	1+3+6+7+9+10	2847	6	0	0	0	0	0	0	0	0	0	0	2860
	1+3+6+7+9+10+13	2847	6	0	0	0	0	0	0	0	0	0	0	2898
	1+3+6+7+9+10+11	2900	6	0	0	0	0	0	0	0	0	0	0	2913

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

* Interviews not completed, though contact was made, data completed by imputation

Response rates for persons wave 3 and wave 2 (R1/05):

wave response rate of sample persons	0.995	achieved sample size ratio for sample persons	0.769
wave response rate of co-residents	1.000	achieved sample size ratio for sample persons and coresidents	0.783
longitudinal follow-up rate	0.982	achieved sample size ratio for co-residents selected in previous wave	0.717
R(RB250=14)	0.002	response rate for non-sample persons	1.000

Table 23 : Personal Interview outcome in wave 4 (R1/05)

		2008												
		Not completed because of												
		RB250 = 11,12,13	RB250=14 *							HHnc		Pn	PI	TOTAL
				RB250 = 21	RB250 = 22	RB250 = 23	RB250 = 31	RB250 = 32	RB250 = 33	HHnc1	HHnc2			
<i>Row</i>	<i>Sample persons forwarded from last wave</i>													
1	RB110 = 1-2	1998	28	0	0	0	0	0	0					2026
2	RB110 = 6													8
3	RB110 = -1													0
4	RB120 = 2													2
5	RB120 = 3													3
6	RB120 = 4													1
7	DB135 = 2 or -1, or DB110 = 7, or DB120 = 21-23 or -1, or DB130 == 21-24 or -1													2
8	DB110 = 3-6													0
<i>New Sample Persons</i>														
9	Reached age 16	31	1	0	0	0	0	0	0	0	0	0	0	32
10	Sample additions	0	0	0	0	0	0	0	0					0
<i>Non-Sample persons 16+</i>														
11	From wave 3 - 2007	42	2	0	0	0	0	0	0	0	0	0	0	44
	From wave 4 - 2008	75	7	0	0	0	0	0	0	0	0	0	0	82
<i>Sample persons not forwarded from last wave (excluded died or not eligible according to tracing rules)</i>														
13	From 2007													20
Sum of Rows														
	1+3+6+7+9+10	2029	29	0	0	0	0	0	0	0	0	0	0	2061
	1+3+6+7+9+10+13	2029	29	0	0	0	0	0	0	0	0	0	0	2081
	1+3+6+7+9+10+11	2104	36	0	0	0	0	0	0	0	0	0	0	2143

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

* Interviews not completed, though contact was made, data completed by imputation

Response rates for persons wave 4 and wave 3 (R1/05):

wave response rate of sample persons	0.984	achieved sample size ratio for sample persons	0.772
wave response rate of co-residents	0.955	achieved sample size ratio for sample persons and coresidents	0.800
longitudinal follow-up rate	0.975	achieved sample size ratio for co-residents selected in previous wave	0.488
R(RB250=14)	0.014	response rate for non-sample persons	0.929

2.3.3.3. Distribution of households by household status (DB110), by record of contact at the address (DB120), by household questionnaire result (DB130) and by household interview acceptance (DB135)

Table 24 : Distribution of households by household status (R1/05)

	Total	db110 =										
		1	2	3	4	5	6	7	8	9	10	11
<i>2005</i>												
Total	3,823	0	0	0	0	0	0	0	0	3,823	0	0
%	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
<i>2006</i>												
Total	2,011	1889	63	0	2	2	8	8	25	0	0	14
%	100.0	93.9	3.1	0.0	0.1	0.1	0.4	0.4	1.2	0.0	0.0	0.7
<i>2007</i>												
Total	1,844	1644	71	1	8	9	5	28	63	0	0	15
%	100.0	89.2	3.9	0.1	0.4	0.5	0.3	1.5	3.4	0.0	0.0	0.8
<i>2008</i>												
Total	1,425	1250	75	6	1	8	0	0	48	0	0	37
%	100.0	87.7	5.3	0.4	0.1	0.6	0.0	0.0	3.4	0.0	0.0	2.6

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 25 : Distribution of households by contact at address (R1/05)

	Total	db120 =						Missing
		11	21	22	23	24		
<i>2005</i>								
Total	3,823	3658	74	15	76	0	0	
%	100.0	95.7	1.9	0.4	2.0	0.0	0.0	
<i>2006</i>								
Total	2,011	87	1	0	0	0	1,923	
%	100.0	2.3	0.0	0.0	0.0	0.0	95.6	
<i>2007</i>								
Total	1,844	108	22	0	4	0	1,710	
%	100.0	2.8	0.6	0.0	0.1	0.0	92.7	
<i>2008</i>								
Total	1,425	94	26	0	3	0	1,302	
%	100.0	2.5	0.7	0.0	0.1	0.0	91.4	

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 26 : Distribution of households by household questionnaire result (R1/05)

	Total	db130 =						Missing
		11	21	22	23	24		
<i>2005</i>								
Total	3,823	1,986	932	551	48	141	165	
%	100.0	51.9	24.4	14.4	1.3	3.7	4.3	
<i>2006</i>								
Total	2,011	1,707	195	62	10	2	35	
%	100.0	84.9	9.7	3.1	0.5	0.1	1.7	
<i>2007</i>								
Total	1,844	1,519	167	55	11	0	92	
%	100.0	82.4	9.1	3.0	0.6	0.0	5.0	
<i>2008</i>								
Total	1,425	1103	184	51	6	0	81	
%	100.0	77.4	12.9	3.6	0.4	0.0	5.7	

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 27 : Distribution of households by household interview acceptance (R1/05)

	Total	db135 =		
		1	2	Missing
2005				
Total	3,823	1,986	0	1,837
%	100.0	51.9	0.0	48.1
2006				
Total	2,011	1,707	0	304
%	100.0	84.9	0.0	15.1
2007				
Total	1,844	1,519	0	325
%	100.0	82.4	0.0	17.6
2008				
Total	1,425	1,103	0	322
%	100.0	77.4	0.0	22.6

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

2.3.3.4. Distribution of persons for membership status

The following tables are provided for the second, third and fourth wave of the EU-SILC longitudinal component.

Table 28 : Distribution of persons by membership status (R1/05)

	Total	Current household members				Not current household members		
		RB110 = 1	RB110 = 2	RB110 = 3	RB110 = 4	RB110 = 5	RB110 = 6	RB110 = 7
2006	4,225	4,065	17	58	28	45	12	0
%	100.0	96.2	0.4	1.4	0.7	1.1	0.3	0.0
2007	3,827	3,574	35	62	30	104	19	3
%	100.0	128.3	1.3	2.2	1.1	3.7	0.7	0.1
2008	2,785	2,572	32	64	24	75	10	8
%	100.0	92.4	1.1	2.3	0.9	2.7	0.4	0.3

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 29 : Distribution of persons moving out by variable RB120 (R1/05)

	RB110 = 5						
	Total	RB120 = 1			Not current household members		
		This person is a current household member of another household this wave	This person is not a current household member		RB120 = 2	RB120 = 3	RB120 = 4
2006	45	13	22	2	5	3	
%	100	28.9	48.9	4.4	11.1	6.7	
2007	104	32	53	5	4	10	
%	100	30.8	51.0	4.8	3.8	9.6	
2008	75	29	36	3	4	3	
%	100	38.7	48.0	4.0	5.3	4.0	

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

2.3.3.5. Item non-response

The following tables provide an overview of non-response on household and individual level. For every income component the total number of households/persons having received the component is given and a breakdown with regard to the completeness of the information is shown. The percentages next to the totals in the first column refer to the ratio of the number of households/persons having received an amount of the respective income component compared to the number of all completed household or personal interviews (i.e. DB135=1 or RB245 in [11;12;13;14]). The tables cover the dataset for each wave and for each wave the fraction interviewed in all four waves.

Table 30 : Information on item non-response on household level – households 2005 (R1/05)

		Households having received an amount		Full information		Partial information		Missing information	
		Total	% of all interviewed households	Total	%	Total	%	Total	%
<i>Household incomes</i>									
HY010	Total household gross income	1,986	100.0	817	41.1	1,027	51.7	142	7.2
HY020	Total disposable household income	1,986	100.0	1,237	62.3	726	36.6	23	1.2
HY022	Total disposable household income before social transfers other than old-age and survivors' benefits	1,957	98.5	1,232	63.0	693	35.4	32	1.6
HY023	Total disposable household income including old-age and survivors' benefits	1,869	94.1	1,189	63.6	584	31.2	96	5.1
<i>Net income components at household level</i>									
HY040N	Income from rental of a property or land	83	4.2	58	69.9	19	22.9	6	7.2
HY050N	Family/child related allowances	675	34.0	673	99.7	2	0.3	0	0.0
HY060N	Social exclusion not elsewhere classified	39	2.0	33	84.6	1	2.6	5	12.8
HY070N	Housing allowances	79	4.0	75	94.9	1	1.3	3	3.8
HY080N	Regular inter-household cash transfer received	127	6.4	118	92.9	0	0.0	9	7.1
HY090N	Interest, dividends, profit from capital investments	1,530	77.0	1,055	69.0	127	8.3	348	22.7
HY110N	Income received by people aged under 16	16	0.8	13	81.3	0	0.0	3	18.8
HY130N	Regular inter-household cash transfer paid	156	7.9	148	94.9	2	1.3	6	3.8
HY145N	Repayments/receipts for tax adjustment	847	42.6	840	99.2	2	0.2	5	0.6
<i>Gross income components at household level</i>									
HY040G	Income from rental of a property or land	83	4.2	32	38.6	15	18.1	36	43.4
HY050G	Family/child related allowances	675	34.0	673	99.7	2	0.3	0	0.0
HY060G	Social exclusion not elsewhere classified	39	2.0	33	84.6	1	2.6	5	12.8
HY070G	Housing allowances	79	4.0	75	94.9	1	1.3	3	3.8
HY080G	Regular inter-household cash transfer received	127	6.4	118	92.9	0	0.0	9	7.1
HY090G	Interest, dividends, profit from capital investments	1,530	77.0	1,055	69.0	127	8.3	348	22.7
HY110G	Income received by people aged under 16	16	0.8	13	81.3	0	0.0	3	18.8
HY130G	Regular inter-household cash transfer paid	156	7.9	148	94.9	2	1.3	6	3.8
HY140G	Tax on Income and Social Contributions	1,961	98.7	806	41.1	1,104	56.3	51	2.6

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 31 : Information on item non-response on household level – households 2006 (R1/05)

		Households having received an amount		Full information		Partial information		Missing information	
		Total	% of all interviewed households	Total	%	Total	%	Total	%
<i>Household incomes</i>									
HY010	Total household gross income	1,707	100.0	597	35.0	983	57.6	127	7.4
HY020	Total disposable household income	1,707	100.0	1,044	61.2	649	38.0	14	0.8
HY022	Total disposable household income before social transfers other than old-age and survivors' benefits	1,676	98.2	1,031	61.5	622	37.1	23	1.4
HY023	Total disposable household income including old-age and survivors' benefits	1,580	92.6	991	62.7	498	31.5	91	5.8
<i>Net income components at household level</i>									
HY040N	Income from rental of a property or land	63	3.7	51	81.0	1	1.6	11	17.5
HY050N	Family/child related allowances	577	33.8	576	99.8	1	0.2	0	0.0
HY060N	Social exclusion not elsewhere classified	37	2.2	33	89.2	2	5.4	2	5.4
HY070N	Housing allowances	57	3.3	56	98.2	1	1.8	0	0.0
HY080N	Regular inter-household cash transfer received	117	6.9	116	99.1	0	0.0	1	0.9
HY090N	Interest, dividends, profit from capital investments	1,298	76.0	865	66.6	83	6.4	350	27.0
HY110N	Income received by people aged under 16	7	0.4	6	85.7	0	0.0	1	14.3
HY130N	Regular inter-household cash transfer paid	110	6.4	105	95.5	3	2.7	2	1.8
HY145N	Repayments/receipts for tax adjustment	740	43.4	716	96.8	11	1.5	13	1.8
<i>Gross income components at household level</i>									
HY040G	Income from rental of a property or land	63	3.7	32	50.8	10	15.9	21	33.3
HY050G	Family/child related allowances	577	33.8	576	99.8	1	0.2	0	0.0
HY060G	Social exclusion not elsewhere classified	37	2.2	33	89.2	2	5.4	2	5.4
HY070G	Housing allowances	57	3.3	56	98.2	1	1.8	0	0.0
HY080G	Regular inter-household cash transfer received	117	6.9	116	99.1	0	0.0	1	0.9
HY090G	Interest, dividends, profit from capital investments	1,298	76.0	865	66.6	83	6.4	350	27.0
HY110G	Income received by people aged under 16	7	0.4	5	71.4	0	0.0	2	28.6
HY130G	Regular inter-household cash transfer paid	110	6.4	105	95.5	3	2.7	2	1.8
HY140G	Tax on Income and Social Contributions	1,673	98.0	603	36.0	1,025	61.3	45	2.7

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 32 : Information on item non-response on household level – households 2007 (R1/05)

		Households having received an amount		Full information		Partial information		Missing information	
		Total	% of all interviewed households	Total	%	Total	%	Total	%
<i>Household incomes</i>									
HY010	Total household gross income	1,519	100.0	413	27.2	974	64.1	132	8.7
HY020	Total disposable household income	1,519	100.0	915	60.2	595	39.2	9	0.6
HY022	Total disposable household income before social transfers other than old-age and survivors' benefits	1,499	98.7	916	61.1	570	38.0	13	0.9
HY023	Total disposable household income including old-age and survivors' benefits	1,398	92.0	863	61.7	482	34.5	53	3.8
<i>Net income components at household level</i>									
HY040N	Income from rental of a property or land	52	3.4	51	98.1	0	0.0	1	1.9
HY050N	Family/child related allowances	524	34.5	520	99.2	4	0.8	0	0.0
HY060N	Social exclusion not elsewhere classified	34	2.2	33	97.1	0	0.0	1	2.9
HY070N	Housing allowances	56	3.7	54	96.4	0	0.0	2	3.6
HY080N	Regular inter-household cash transfer received	109	7.2	104	95.4	1	0.9	4	3.7
HY090N	Interest, dividends, profit from capital investments	1,132	74.5	780	68.9	69	6.1	283	25.0
HY110N	Income received by people aged under 16	12	0.8	11	91.7	0	0.0	1	8.3
HY130N	Regular inter-household cash transfer paid	100	6.6	89	89.0	2	2.0	9	9.0
HY145N	Repayments/receipts for tax adjustment	670	44.1	659	98.4	4	0.6	7	1.0
<i>Gross income components at household level</i>									
HY040G	Income from rental of a property or land	52	3.4	0	0.0	0	0.0	52	100.0
HY050G	Family/child related allowances	524	34.5	513	97.9	11	2.1	0	0.0
HY060G	Social exclusion not elsewhere classified	34	2.2	33	97.1	0	0.0	1	2.9
HY070G	Housing allowances	56	3.7	54	96.4	0	0.0	2	3.6
HY080G	Regular inter-household cash transfer received	109	7.2	104	95.4	1	0.9	4	3.7
HY090G	Interest, dividends, profit from capital investments	1,132	74.5	780	68.9	69	6.1	283	25.0
HY110G	Income received by people aged under 16	12	0.8	7	58.3	0	0.0	5	41.7
HY130G	Regular inter-household cash transfer paid	100	6.6	89	89.0	2	2.0	9	9.0
HY140G	Tax on Income and Social Contributions	1,498	98.6	446	29.8	1,034	69.0	18	1.2

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 33 : Information on item non-response on household level – households 2008 (R1/05)

		Households having received an amount		Full information		Partial information		Missing information	
		Total	% of all interviewed households	Total	%	Total	%	Total	%
<i>Household incomes</i>									
HY010	Total household gross income*	1,102	99.9	369	33.5	694	63.0	39	3.5
HY020	Total disposable household income*	1,102	99.9	759	68.9	337	30.6	6	0.5
HY022	Total disposable household income before social transfers other than old-age and survivors' benefits	1,092	99.0	762	69.8	321	29.4	9	0.8
HY023	Total disposable household income including old-age and survivors' benefits	1,044	94.7	747	71.6	276	26.4	21	2.0
<i>Net income components at household level</i>									
HY040N	Income from rental of a property or land	58	5.3	57	98.3	1	1.7	0	0.0
HY050N	Family/child related allowances	395	35.8	392	99.2	3	0.8	0	0.0
HY060N	Social exclusion not elsewhere classified	55	5.0	53	96.4	0	0.0	2	3.6
HY070N	Housing allowances	48	4.4	46	95.8	1	2.1	1	2.1
HY080N	Regular inter-household cash transfer received	82	7.4	80	97.6	0	0.0	2	2.4
HY090N	Interest, dividends, profit from capital investments	896	81.2	781	87.2	45	5.0	70	7.8
HY110N	Income received by people aged under 16	27	2.4	26	96.3	0	0.0	1	3.7
HY130N	Regular inter-household cash transfer paid	112	10.2	109	97.3	1	0.9	2	1.8
HY145N	Repayments/receipts for tax adjustment	578	52.4	566	97.9	6	1.0	6	1.0
<i>Gross income components at household level</i>									
HY040G	Income from rental of a property or land	58	5.3	0	0.0	0	0.0	58	100.0
HY050G	Family/child related allowances	395	35.8	392	99.2	3	0.8	0	0.0
HY060G	Social exclusion not elsewhere classified	55	5.0	53	96.4	0	0.0	2	3.6
HY070G	Housing allowances	48	4.4	46	95.8	1	2.1	1	2.1
HY080G	Regular inter-household cash transfer received	82	7.4	80	97.6	0	0.0	2	2.4
HY090G	Interest, dividends, profit from capital investments	896	81.2	781	87.2	45	5.0	70	7.8
HY110G	Income received by people aged under 16	27	2.4	16	59.3	1	3.7	10	37.0
HY130G	Regular inter-household cash transfer paid	112	10.2	109	97.3	1	0.9	2	1.8
HY140G	Tax on Income and Social Contributions	1,094	99.2	420	38.4	664	60.7	10	0.9

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

*For one household all income components were recorded as zero and therefore the household was excluded from the table.

Table 34 : Information on item non-response on individual level – persons 2005 (R1/05)

		Persons having received an amount		Full information		Partial information		Missing information	
		Total	%	Total	%	Total	%	Total	%
<i>Net income components at personal level</i>									
PY010N	Employee cash or near cash income	2,144	54.9	1,888	88.1	156	7.3	100	4.7
PY035N	Contributions to individual private pension plans	931	23.8	892	95.8	0	0.0	39	4.2
PY050N	Cash benefits or losses from self-employment	363	9.3	243	66.9	69	19.0	51	14.0
PY070N	Value of goods produced by own-consumption	71	1.8	70	98.6	0	0.0	1	1.4
PY080N	Pension from individual private plans	19	0.5	18	94.7	0	0.0	1	5.3
PY090N	Unemployment benefits	256	6.6	233	91.0	7	2.7	16	6.3
PY100N	Old-age benefits	890	22.8	805	90.4	46	5.2	39	4.4
PY110N	Survivors' benefits	42	1.1	39	92.9	0	0.0	3	7.1
PY120N	Sickness benefits	71	1.8	55	77.5	5	7.0	11	15.5
PY130N	Disability benefits	126	3.2	119	94.4	2	1.6	5	4.0
PY140N	Education-related allowances	52	1.3	52	100.0	0	0.0	0	0.0
<i>Gross income components at personal level</i>									
PY010G	Employee cash or near cash income	2,144	54.9	1,405	65.5	126	5.9	613	28.6
PY035G	Contributions to individual private pension plans	931	23.8	892	95.8	0	0.0	39	4.2
PY050G	Cash benefits or losses from self-employment	363	9.3	151	41.6	49	13.5	163	44.9
PY070G	Value of goods produced by own-consumption	71	1.8	70	98.6	0	0.0	1	1.4
PY080G	Pension from individual private plans	19	0.5	7	36.8	0	0.0	12	63.2
PY090G	Unemployment benefits	256	6.6	231	90.2	8	3.1	17	6.6
PY100G	Old-age benefits	890	22.8	410	46.1	176	19.8	304	34.2
PY110G	Survivor's benefits	42	1.1	16	38.1	8	19.0	18	42.9
PY120G	Sickness benefits	71	1.8	34	47.9	11	15.5	26	36.6
PY130G	Disability benefits	126	3.2	62	49.2	20	15.9	44	34.9
PY140G	Education-related allowances	52	1.3	52	100.0	0	0.0	0	0.0

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 35 : Information on item non-response on individual level – persons 2006 (R1/05)

		Persons having received an amount		Full information		Partial information		Missing information	
		Total	%	Total	%	Total	%	Total	%
<i>Net income components at personal level</i>									
PY010N	Employee cash or near cash income	1,769	52.3	1,554	87.8	137	7.7	78	4.4
PY035N	Contributions to individual private pension plans	786	23.3	740	94.1	2	0.3	44	5.6
PY050N	Cash benefits or losses from self-employment	306	9.1	258	84.3	4	1.3	44	14.4
PY070N	Value of goods produced by own-consumption	76	2.2	64	84.2	0	0.0	12	15.8
PY080N	Pension from individual private plans	10	0.3	9	90.0	0	0.0	1	10.0
PY090N	Unemployment benefits	228	6.7	207	90.8	14	6.1	7	3.1
PY100N	Old-age benefits	845	25.0	752	89.0	63	7.5	30	3.6
PY110N	Survivors' benefits	35	1.0	32	91.4	0	0.0	3	8.6
PY120N	Sickness benefits	44	1.3	31	70.5	1	2.3	12	27.3
PY130N	Disability benefits	110	3.3	106	96.4	3	2.7	1	0.9
PY140N	Education-related allowances	35	1.0	30	85.7	0	0.0	5	14.3
<i>Gross income components at personal level</i>									
PY010G	Employee cash or near cash income	1,769	52.3	1,066	60.3	108	6.1	595	33.6
PY035G	Contributions to individual private pension plans	786	23.3	740	94.1	2	0.3	44	5.6
PY050G	Cash benefits or losses from self-employment	306	9.1	149	48.7	18	5.9	139	45.4
PY070G	Value of goods produced by own-consumption	76	2.2	64	84.2	0	0.0	12	15.8
PY080G	Pension from individual private plans	10	0.3	3	30.0	0	0.0	7	70.0
PY090G	Unemployment benefits	228	6.7	201	88.2	17	7.5	10	4.4
PY100G	Old-age benefits	845	25.0	364	43.1	190	22.5	291	34.4
PY110G	Survivor's benefits	35	1.0	13	37.1	10	28.6	12	34.3
PY120G	Sickness benefits	44	1.3	10	22.7	7	15.9	27	61.4
PY130G	Disability benefits	110	3.3	58	52.7	22	20.0	30	27.3
PY140G	Education-related allowances	35	1.0	30	85.7	0	0.0	5	14.3

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 36 : Information on item non-response on individual level – persons 2007 (R1/05)

		Persons having received an amount		Full information		Partial information		Missing information	
		Total	%	Total	%	Total	%	Total	%
<i>Net income components at personal level</i>									
PY010N	Employee cash or near cash income	1,612	53.4	1,463	90.8	113	7.0	36	2.2
PY035N	Contributions to individual private pension plans	720	23.8	675	93.8	0	0.0	45	6.3
PY050N	Cash benefits or losses from self-employment	277	9.2	247	89.2	6	2.2	24	8.7
PY070N	Value of goods produced by own-consumption	98	3.2	86	87.8	0	0.0	12	12.2
PY080N	Pension from individual private plans	10	0.3	10	100.0	0	0.0	0	0.0
PY090N	Unemployment benefits	187	6.2	175	93.6	7	3.7	5	2.7
PY100N	Old-age benefits	774	25.6	699	90.3	45	5.8	30	3.9
PY110N	Survivors' benefits	28	0.9	27	96.4	0	0.0	1	3.6
PY120N	Sickness benefits	42	1.4	38	90.5	1	2.4	3	7.1
PY130N	Disability benefits	96	3.2	92	95.8	2	2.1	2	2.1
PY140N	Education-related allowances	35	1.2	33	94.3	1	2.9	1	2.9
<i>Gross income components at personal level</i>									
PY010G	Employee cash or near cash income	1,612	53.4	893	55.4	106	6.6	613	38.0
PY035G	Contributions to individual private pension plans	720	23.8	675	93.8	0	0.0	45	6.3
PY050G	Cash benefits or losses from self-employment	277	9.2	8	2.9	13	4.7	256	92.4
PY070G	Value of goods produced by own-consumption	98	3.2	86	87.8	0	0.0	12	12.2
PY080G	Pension from individual private plans	10	0.3	6	60.0	0	0.0	4	40.0
PY090G	Unemployment benefits	187	6.2	171	91.4	8	4.3	8	4.3
PY100G	Old-age benefits	774	25.6	320	41.3	126	16.3	328	42.4
PY110G	Survivor's benefits	28	0.9	11	39.3	7	25.0	10	35.7
PY120G	Sickness benefits	42	1.4	13	31.0	7	16.7	22	52.4
PY130G	Disability benefits	96	3.2	47	49.0	14	14.6	35	36.5
PY140G	Education-related allowances	35	1.2	33	94.3	1	2.9	1	2.9

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 37 : Information on item non-response on individual level – persons 2008 (R1/05)

		Persons having received an amount		Full information		Partial information		Missing information	
		Total	%	Total	%	Total	%	Total	%
<i>Net income components at personal level</i>									
PY010N	Employee cash or near cash income	1,166	53.4	955	81.9	153	13.1	58	5.0
PY035N	Contributions to individual private pension plans	580	26.6	548	94.5	0	0.0	32	5.5
PY050N	Cash benefits or losses from self-employment	233	10.7	209	89.7	0	0.0	24	10.3
PY070N	Value of goods produced by own-consumption	77	3.5	74	96.1	0	0.0	3	3.9
PY080N	Pension from individual private plans	12	0.5	11	91.7	0	0.0	1	8.3
PY090N	Unemployment benefits	143	6.5	133	93.0	4	2.8	6	4.2
PY100N	Old-age benefits	622	28.5	562	90.4	33	5.3	27	4.3
PY110N	Survivors' benefits	29	1.3	28	96.6	0	0.0	1	3.4
PY120N	Sickness benefits	63	2.9	57	90.5	2	3.2	4	6.3
PY130N	Disability benefits	65	3.0	64	98.5	1	1.5	0	0.0
PY140N	Education-related allowances	44	2.0	41	93.2	2	4.5	1	2.3
<i>Gross income components at personal level</i>									
PY010G	Employee cash or near cash income	1,166	53.4	686	58.8	134	11.5	346	29.7
PY035G	Contributions to individual private pension plans	580	26.6	548	94.5	0	0.0	32	5.5
PY050G	Cash benefits or losses from self-employment	233	10.7	6	2.6	10	4.3	217	93.1
PY070G	Value of goods produced by own-consumption	77	3.5	74	96.1	0	0.0	3	3.9
PY080G	Pension from individual private plans	12	0.5	7	58.3	0	0.0	5	41.7
PY090G	Unemployment benefits	143	6.5	130	90.9	6	4.2	7	4.9
PY100G	Old-age benefits	622	28.5	313	50.3	95	15.3	214	34.4
PY110G	Survivor's benefits	29	1.3	8	27.6	7	24.1	14	48.3
PY120G	Sickness benefits	63	2.9	27	42.9	9	14.3	27	42.9
PY130G	Disability benefits	65	3.0	36	55.4	8	12.3	21	32.3
PY140G	Education-related allowances	44	2.0	41	93.2	2	4.5	1	2.3

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

2.4. Mode of data collection

Table 38 : Distribution of household members by data status – all household members (16+) (R1/05)

	Total	RB250 = 11	RB250 = 12	RB250 = 14	RB250 = 21	RB250 = 23
2005						
Total	3,904	3,890	0	14	0	0
%	100.0	99.6	0.0	0.4	0.0	0.0
2006						
Total	3,380	3,363	0	17	0	0
%	100.0	99.5	0.0	0.5	0.0	0.0
2007						
Total	3,020	3,014	0	6	0	0
%	100.0	99.8	0.0	0.2	0.0	0.0
2008						
Total	2,184	2,145	0	39	0	0
%	100.0	98.2	0.0	1.8	0.0	0.0
2005-2008						
Total	12,488	12,412	0	76	0	0
%	100.0	99.4	0.0	0.6	0.0	0.0

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 39 : Distribution of household members by data status – sample persons (16+) (R1/05)

	Total	RB250 = 11	RB250 = 12	RB250 = 14	RB250 = 21	RB250 = 23
2005						
Total	3,904	3,890	0	14	0	0
%	100.0	99.6	0.0	0.4	0.0	0.0
2006						
Total	3,333	3,317	0	16	0	0
%	100.0	99.5	0.0	0.5	0.0	0.0
2007						
Total	2,934	2,928	0	6	0	0
%	100.0	99.8	0.0	0.2	0.0	0.0
2008						
Total	2,058	2,028	0	30	0	0
%	100.0	98.5	0.0	1.5	0.0	0.0
2005-2008						
Total	12,229	12,163	0	66	0	0
%	100.0	99.5	0.0	0.5	0.0	0.0

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 40 : Distribution of household members by data status – co-residents (16+) (R1/05)

	Total	RB250 = 11	RB250 = 12	RB250 = 14	RB250 = 21	RB250 = 23
2005						
Total	0	0	0	0	0	0
%	0.0	0.0	0.0	0.0	0.0	0.0
2006						
Total	47	46	0	1	0	0
%	100.0	97.9	0.0	2.1	0.0	0.0
2007						
Total	86	86	0	0	0	0
%	100.0	100.0	0.0	0.0	0.0	0.0
2008						
Total	126	117	0	9	0	0
%	100.0	92.9	0.0	7.1	0.0	0.0
2005-2008						
Total	259	249	0	10	0	0
%	100.0	96.1	0.0	3.9	0.0	0.0

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 41 : Distribution of household members by type of interview– all household members (16+) (R1/05)

	Total	RB260 = 1	RB260 = 2	RB260 = 3	RB260 = 4	RB260 = 5
<i>2005</i>						
Total	3,890	0	2,889	101	0	900
%	100.0	0.0	74.3	2.6	0.0	23.1
<i>2006</i>						
Total	3,363	0	2,708	21	0	634
%	100.0	0.0	80.5	0.6	0.0	18.9
<i>2007</i>						
Total	3,014	0	2,096	316	0	602
%	100.0	0.0	69.5	10.5	0.0	20.0
<i>2008</i>						
Total	2,145	0	715	764	0	666
%	100.0	0.0	33.3	35.6	0.0	31.0
<i>2005-2008</i>						
Total	12,412	0	8,408	1,202	0	2,802
%	100.0	0.0	67.7	9.7	0.0	22.6

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 42 : Distribution of household members by type of interview– sample persons (16+) (R1/05)

	Total	RB260 = 1	RB260 = 2	RB260 = 3	RB260 = 4	RB260 = 5
<i>2005</i>						
Total	3,890	0	2,889	101	0	900
%	100.0	0.0	74.3	2.6	0.0	23.1
<i>2006</i>						
Total	3,317	0	2,683	21	0	613
%	100.0	0.0	80.9	0.6	0.0	18.5
<i>2007</i>						
Total	2,928	0	2,060	304	0	564
%	100.0	0.0	70.4	10.4	0.0	19.3
<i>2008</i>						
Total	2,028	0	688	743	0	597
%	100.0	0.0	33.9	36.6	0.0	29.4
<i>2005-2008</i>						
Total	12,163	0	8,320	1,169	0	2,674
%	100.0	0.0	68.4	9.6	0.0	22.0

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

Table 43 : Distribution of household members by type of interview– co-residents (16+) (R1/05)

	Total	RB260 = 1	RB260 = 2	RB260 = 3	RB260 = 4	RB260 = 5
<i>2005</i>						
Total	0	0	0	0	0	0
%	0.0	0.0	0.0	0.0	0.0	0.0
<i>2006</i>						
Total	46	0	25	0	0	21
%	100.0	0.0	54.3	0.0	0.0	45.7
<i>2007</i>						
Total	86	0	36	12	0	38
%	100.0	0.0	41.9	14.0	0.0	44.2
<i>2008</i>						
Total	117	0	27	21	0	69
%	100.0	0.0	23.1	17.9	0.0	59.0
<i>2005-2008</i>						
Total	249	0	88	33	0	128
%	100.0	0.0	35.3	13.3	0.0	51.4

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

2.5. Imputation procedure

The following chapter describes the imputation procedures in EU-SILC 2005, EU-SILC 2006, EU-SILC 2007 and EU-SILC 2008.

General remarks

The imputation procedures in EU-SILC 2005, EU-SILC 2006, EU-SILC 2007 and EU-SILC 2008 are the same. Imputation refers to all procedures to estimate and insert variable values that are missing due to item non-response.¹⁸

These procedures comprise

- deductive methods
- deterministic methods
- stochastic methods

Deductive methods refer to imputation procedures in which the true value of a missing item is logically deduced. This means that the value is either deduced from other variables of the survey or is derived from legal regulations. An example for the first mode of deductions is the net-gross-net conversion, when either the gross value or the net value is given and the corresponding missing value is calculated by applying general rules. An example for the latter mode is when the value of the childcare benefit (*Kinderbetreuungsgeld*) is missing and the effectual value can be inserted.

The difference between deterministic and stochastic methods is whether the calculation procedure to calculate the missing item includes a residual term or not. Deterministic methods were primarily used in cases when the integration of a residual term seemed unreasonable. Stochastic methods were mainly used to estimate missing income variables. Imputation procedures were both applied to complete missing information because of unit-non response or because of item-non response.

Missing personal interviews

Statistics Austria replaces missing personal interviews of persons that could not be interviewed because of temporary absence, because of refusal of cooperation or because of other reasons. To do so, a distance function to determine an appropriate donor case to complete the information for the missing interview is applied. The distance function uses a given set of variables to compute the similarity of interviews and ranks the interviews accordingly. Then the nearest neighbour is determined as a donor, given that a set of minimum requirements is fulfilled:

- The donor case and the case with the missing personal interview share the same sex.
- The interview is not a proxy interview.
- The donor case should share the same employment status¹⁹

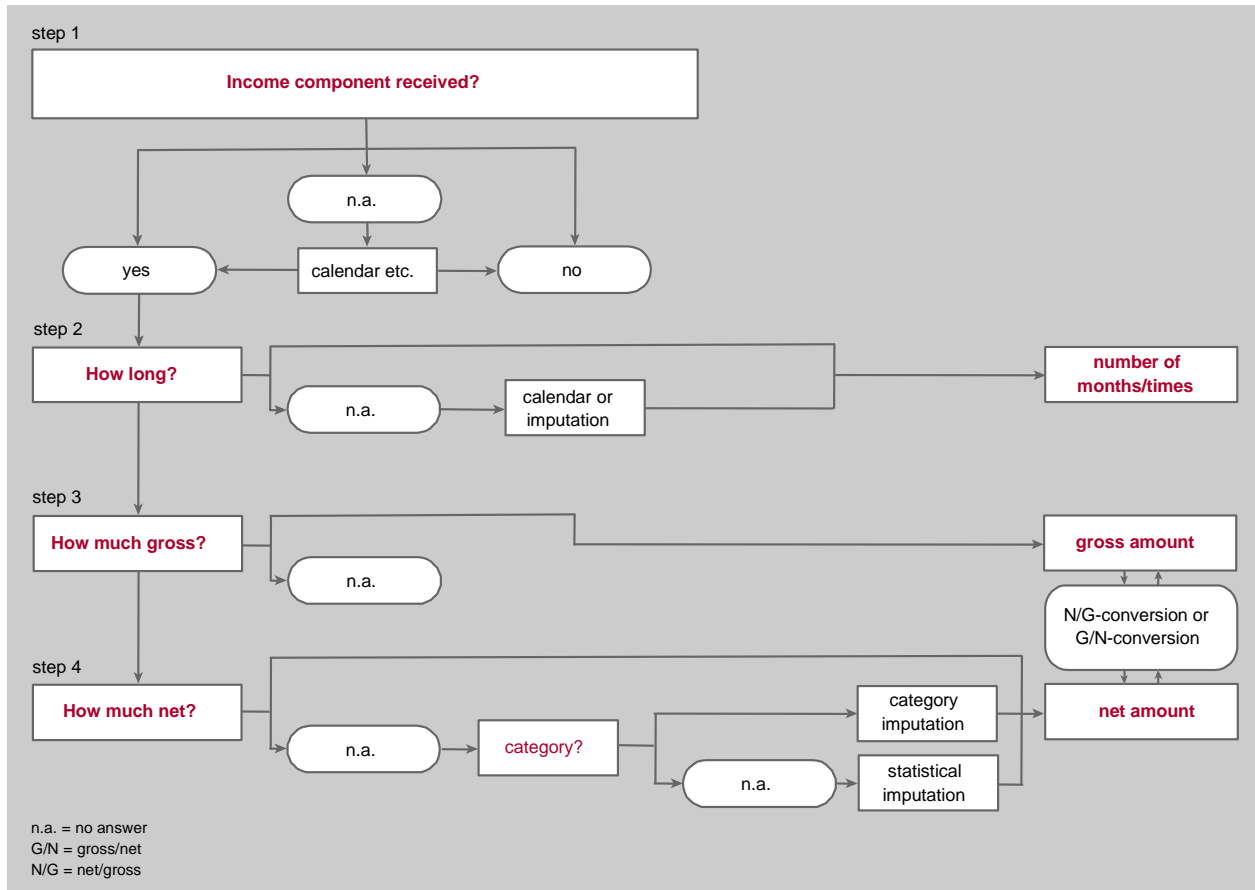
Two procedures of imputing missing personal interviews are possible here: the person has been interviewed for the first time or the person was interviewed in the previous year. When the person was interviewed in the preceding survey, the information of the last years' interview was used to calculate the distance function. The interviews of the previous year were ranked and the nearest neighbour was identified as the donor for the missing interview. The information of the donor was then used to impute the required information.

As far as item non-response is concerned, Statistics Austria in general only imputes net income variables, missing gross variables are calculated by the net-gross conversion. The following figure describes the procedure for missing information for income questions.

¹⁸ A full description of the imputation procedure can be found in the annual intermediate quality reports.

¹⁹ This was done by determining the number of ranks up until this constraint is fulfilled.

Figure 4: Editing procedure for income data



Item non-response for the collected income components are presented in Table 30 - Table 37 on household and personal level and for both net and gross values. Table 44 shows the percentage of imputation over the total number of observations per target variable. The components imputed rent (HY030) and interest repayments on mortgages (HY100) are not directly collected from the respondents and therefore excluded. The corresponding gross values of the net-income values in Table 44 are not included because these variables are calculated on the base of the net value, adding tax and social security payments.

Table 44 : Percentage of imputation over the total number of observations (R1/05)

	2005 %	2006 %	2007 %	2008 %
Total household gross income	58.9	65.0	72.8	66.5
Total disposable household income	37.7	38.8	39.8	31.1
Total disposable household income before social transfers other than old-age and survivors' benefits	37.0	38.5	38.9	30.2
Total disposable household income before social transfers including old-age and survivors' benefits	36.4	37.3	38.3	28.4
<i>Net income components at household level</i>				
Income from rental of a property or land	30.1	19.0	1.9	1.7
Family/child related allowances	0.3	0.2	0.8	0.8
Social exclusion not elsewhere classified	15.4	10.8	2.9	3.6
Housing allowances	5.1	1.8	3.6	4.2
Regular inter-household cash transfer received	7.1	0.9	4.6	2.4
Interest, dividends, profit from capital investments	31.0	33.4	31.1	12.8
Income received by people aged under 16	18.8	14.3	8.3	3.7
Regular inter-household cash transfer paid	5.1	4.5	11.0	2.7
Repayments/receipts for tax adjustment	0.8	3.2	1.6	2.1
<i>Net income components at personal level</i>				
Employee cash or near cash income	11.9	12.1	9.2	18.1
Contributions to individual private pension plans	4.2	5.8	6.3	5.5
Cash benefits or losses from self-employment	33.1	15.7	10.8	10.3
Value of goods produced by own-consumption	1.4	16.0	12.2	3.9
Pension from individual private plans	5.3	10.0	0.0	8.3
Unemployment benefits	9.0	9.3	6.4	7.0
Old-age benefits	9.6	10.9	9.7	9.6
Survivors' benefits	7.1	8.6	3.6	3.4
Sickness benefits	22.5	29.5	9.5	9.5
Disability benefits	5.6	2.8	4.2	1.5
Education-related allowances	0.0	14.3	5.7	6.8

Source: Statistics Austria, EU-SILC longitudinal sample 2005-2008.

2.6. Imputed rent

For the waves in 2005 and 2006 Statistics Austria has not calculated imputed rents. However, in 2007, the calculation of imputed rents (HY030G/N) became obligatory.

Households living in a self-owned dwelling or in a rent-free dwelling or in a dwelling that is rented at a reduced rate enjoy a financial advantage compared to households living in a rented dwelling. The idea of imputed rents is, then, to quantify and estimate that financial advantage for the computation of household incomes. The aim, then, is to estimate the virtual rent for self-owned dwellings (and rent-free dwellings and dwellings rented at a reduced rate), that a household would have to pay on the free market for its dwelling. This virtual rent, then, is used as a proxy for the financial advantage and is calculated as the imputed rent.

The imputed rent is in short calculated on the basis of the data of the Austrian Microcensus. Based on this data linear regression models are used to estimate the rent for those dwellings, for which no rent information is available (including those dwellings that are rented at a reduced price). This estimate is then used as imputed rent. For

dwellings that are rented at a reduced rate, the imputed rent equals the difference between the actually paid rent and the estimated virtual rent for the dwelling.²⁰

2.7. Company cars

The private use of a company car was recorded in the questionnaire of all four years. The value of this use was deduced according to the relevant tax regulations. The value is included in the variable PY010.

3. Comparability

This chapter reports on the differences between EUROSTAT definitions and the definitions applied in EU-SILC 2005, EU-SILC 2006, EU-SILC 2007 and EU-SILC 2008. The impact of differences on the comparability is also described.

Moreover, this chapter also reports on the application of definitions in EU-SILC 2005, EU-SILC 2006, EU-SILC 2007 and EU-SILC 2008. It is important to note that these descriptions do not necessarily affect the comparability of the variables concerned. The EUROSTAT definitions are specified in EU-SILC Doc 65 (2005-2008 operations).

As requested, the first part of the chapter reports on the basic concepts and definitions applied in EU-SILC and the second part reports on the income components in particular.

3.1. Basic concepts and definitions

(a) Reference population

No difference to the common definition in all four waves.

(b) Private household

The following definition refers to EU-SILC 2005, EU-SILC 2006, EU-SILC 2007 and EU-SILC 2008 similarly.

Private households are generally defined as a person living alone or a group of persons living in the same dwelling. All persons at the dwelling form the household as shared expenses are assumed.

Household members thus are:

- All persons who are actually living in the dwelling unit. The question whether these residents have their main residence in this particular dwelling, is not relevant. Only those dwellings are included in the sampling frame in which at least one person age 16 years or older has his or her main residence.
- Lodgers, visitors, au-pairs and guests are considered members of the household if they stay or intend to stay 6 months or longer in the household, or if they do not have any other home address.
- Persons who are temporarily away for less than 6 months and are not members of other private households.
- Household members who are absent for 6 months or longer who are not members of other private households and/or are children or partners of actual household members.
- Under the assumption of sharing expenses only one household per dwelling was counted.
- From 2007 onwards the definition is applied more precisely to fully comply with the EUROSTAT definition: If there is more than one household living in one dwelling and not sharing expenses, they are collected as different households. If the persons living at the particular address clearly do not share their expenses (meaning for example a lodger is paying for his or her rent and does not share utility costs or food with the rest of the household), a separate additional household is registered at the same address. Flat-sharing communities are in most of the cases considered as one household because in the majority of cases the members of such communities are sharing their living costs. If the expenses of the flat-sharing community are not shared, meaning that the payments for rent, operating costs and daily expenses are paid individually, the members would constitute individual households.

The following groups of persons connected to the household are not considered as household members:

- Persons 6 months or longer away from the household and not parents or children of actual household members
- Persons less than 6 months away from the household but living in or constituting another private household.

²⁰ For details on the computation of the imputed rents see the final report of the EU-SILC Study on Comparability of National Implementation, Part 2, Computation of imputed rents.

(c) Household membership

Analogous to the definition of private household 2005-2008.

(d) Income period(s) used

No difference to the common definition. The income reference year for EU-SILC 2005 was 2004, for EU-SILC 2006 the year 2005, for EU-SILC 2007 the year 2006 and for EU-SILC 2008 the year 2007.

(e) The period for taxes on income and social insurance contributions

No difference to the common definition. Income reference years again were 2004, 2005, 2006 and 2007, meaning that repayments and receipts of tax adjustments are measured if the money was paid or received in the respective year.

(f) The reference period for taxes on wealth

There are no taxes on wealth in Austria.

(g) The lag between the income reference period and current variables

For EU-SILC 2005 the fieldwork started in April and was finished at the end of November, exceeding the recommended termination of the fieldwork by three months. In 2006 the fieldwork period started on the 6th of April and ended on the 24th of September. In 2007 the fieldwork was conducted from the 16th of March to the 23rd of September. Therefore, in EU-SILC 2006 and EU-SILC 2007 the gap between the income reference period and the current period exceeded the prescribed gap of 8 month by 3 weeks. In 2008 the fieldwork period started on the 5th of May and ended on September 15th.

(h) The total duration of the data collection of the sample

The data collection period for EU-SILC 2005 lasted 33 weeks and the last files were received on the 19th of January 2006. For EU-SILC 2006 data collection period lasted 23 weeks. Additionally, until the middle of October several call-backs were carried out, so that the final files were received on the 24th of October 2006. In 2007 data were collected for 27 weeks, the final files all arrived until 25th of October 2007. The final files of the 19 week long fieldwork period of EU-SILC 2008 were transmitted from the fieldwork organisation on the 5th of December.

(i) Basic information on activity status during the income reference period

In all waves the information was collected with the questionnaire by an activity calendar covering each month of the income reference period.

3.2. Components of income

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

In the following section we describe the collection of income components in EU-SILC 2005-2008 in Austria and the application of definitions for income components. Please note that the description of the application of definitions, the description of the data collection procedure and the computation procedure do not necessarily indicate a difference from EUROSTAT definitions and the variable definitions in the relevant documents (mainly EU-SILC Doc 65 for the 2005-2008 operations).

(a) Total household gross income (HY010)

The Austrian questionnaire comprised questions on two income components that are not target variables of EU-SILC. These components were, first, the income received by persons doing their military service or civilian service, and, second, "other income, not elsewhere classified". The latter question was integrated to avoid under-recording caused by misunderstandings. The total disposable household (gross) income contains these two income components. On individual level, the income from military/civilian service was integrated with the income for employees and the "other income" was merged either with the employee income, the income from self-employment or old-age benefits, depending on plausibility. This application of the definitions of target variables in the document EU-SILC 065 is consistent with the guidelines of EUROSTAT.

(b) Total disposable household income (HY020)

See above (HY010).

(c) Total disposable household income, before social transfers other than old-age and survivors' benefits (HY022)

See above (HY010).

(d) Total disposable household income, before social transfers including old-age and survivors' benefits (HY023)

See above (HY010).

(e) Cash-or near-cash employee income (PY010)

This variable additionally includes payments in kind for the private use of company cars, income from compulsory military or civilian service, other income not elsewhere classified (if plausible) and proportional lump-sum payments if the person is employed for more than 1 month. According to the document EU-SILC 065 the fully taxable value for the private use of the company car as near cash income can be included in PY010 because PY021 (company car) foresees a value which indicates the including of the company car in another variable (“-4 – amount included in another component”). Income from civilian/military service and lump sum payments are also added to PY010. If plausible, “other incomes not elsewhere classified” have been added to PY010 as well. This approach is consistent with EUROSTAT’s definitions of target variables.

(f) Non-cash employee income (PY020)

Payments in kind for the private use of a company car are included in PY010. Other payments in kind were recorded for the first time in EU-SILC 2005 but according to the regulation they are only included in PY020 from 2007 on. According to EU-SILC Doc 65 (2008 operation) non-cash employee income includes among others the following subcomponents: Free or subsidised meals, free or subsidised housing, other goods and services. PY020 is not included in the household income.

(g) Cash profits or losses from self-employment (PY050)

This income component includes additionally other income not elsewhere classified, if plausible (see above (HY010) and negative incomes. Additionally, sales revenues from privately sold goods (like sold fruits from the own garden) were added to this income component in 2006. In 2007 and 2008 no gross variables were surveyed, but the respondents were asked to give the amount paid for social security and income tax for their self-employment. These payments were added to the net amounts to obtain the gross amounts. The questions on privately sold goods were asked on the household level to avoid double reporting. The whole amount is attributed to the person with the highest income from self-employment or, in case that there is no self-employed person within the household, to the person with the lowest personal income.

To gather the information for this variable the net amounts from self-employment and the amounts paid for social security and income tax for self-employment were asked. Based on this information the gross amount is calculated. The definitions and calculations for this variable are consistent with EUROSTAT’s definition of the target variable.

(h) Value of goods produced for own consumption

This component was collected from 2005 on and is mandatory from 2007 on. This question appears in the household questionnaire to avoid double reporting. The whole amount is attributed to the person with the highest income from self-employment or, in case that there is no self-employed person within the household, to the person with the lowest personal income. From 2006 onwards sales revenues from privately sold goods are not included (see PY050). PY070 was not included in the household income.

(i) Unemployment benefits (PY090)

If the person is unemployed (for at least 2 months), this income component includes proportional lump-sum payments. This refers to severance payments which are to be included according to the document EU-SILC 065.

(j) Old-age benefits (PY100)

Since the standard retirement age in Austria is 65 years for men and 60 years for women, it contains all pension benefits paid to persons aged 65/60 or over, including other incomes not elsewhere included if the person is retired. This approach is consistent with EUROSTAT’s definitions of target variables.

(k) Employer’s social contributions (PY030)

PY030 is the third income variable that has been asked only since EU-SILC 2007. Employer’s social contributions are calculated as a percentage of employee cash or near cash income (PY010G/N). PY030 is not included in the household income and complies fully with the EUROSTAT guidelines.

3.2.2. The source and procedure used for the collection of income variables

All income data have been collected with questionnaires, no register information was used to obtain income information. The EU-SILC income target variables were split into more differentiated sub-components. These sub-components were defined according to the Austrian tax regulations and benefit system and not directly recorded in the survey. Some components were calculated on the basis of auxiliary information given in the questionnaire. For example the amount of family allowances was calculated upon the number and age of children receiving this benefit.

Between the four waves from EU-SILC 2005 to EU-SILC 2008 the questionnaire was partly revised for some income variables.

In EU-SILC 2006, changes were implemented mainly with regard to the routing of the questionnaire and with regard to checks of the CAPI programme.

2007 was the first year of the Austrian EU-SILC operation where computer assisted telephone interviews were conducted (CATI technique) However the majority of interviews (93.8%) were still carried out with computer assisted

personal interviewing (CAPI). The CATI method was tested on a small subsample of follow-up households (In all four rotations of 2007, 21 CATI interviews were done by the fieldwork institute, 553 CATI interviews were conducted by Statistics Austria). CATI was used more widely in EU-SILC 2008. In this particular year a total of 2,223 CATI interviews were conducted in all rotations.

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

Respondents were asked for all income components that are subject to taxation and/or social security contribution, to give the net and gross amount. Gross in this context means that if a component is subject to taxes and social security contributions both amounts were included. Employer's contributions were not taken into account.

3.2.4. The method used for obtaining the income target variables in the required form

The procedure to obtain the income target variables for EU-SILC was the same for the years 2005 to 2008. Gross and net income variables were asked separately, if applicable. If the respondents were not willing or not able to provide one of these amounts (net or gross) Statistics Austria calculated the missing value on the basis of the information given, e.g. if the net value was given and the gross value was missing, the gross value was calculated on the basis of the net value. If both values were missing (and the respondent refused or was not able to give an income class), Statistics Austria first imputed the net value and then calculated the gross value on the basis of the imputed net value (see chapter 2.6).

The conversion between net and gross values for employees' income and pensions was carried out on the basis of tax statistics. This means wage tax statistics for the income reference year. Income from self-employment was converted on the basis of regression models which used the information of complete cases (cases where the net and the gross value was given).

3.3. Tracing rules

For all four waves of the longitudinal component of EU-SILC, the tracing rules as laid down in the document EU-SILC 065 were applied. To identify the residence of persons moving from one address to another address, Statistics Austria made use of the ZMR.

4. Coherence

Coherence refers to the comparison of target variables with external sources. At present there are no reliable external data for the four-year longitudinal sample of 2005-2008. However, for the EU-SILC 2005, 2006, 2007 and 2008, EU-SILC cross-sectional data were compared to the wage tax statistics, the national accounts and the Microcensus (only EU-SILC 2008). These comparisons can be found in the Austrian intermediate quality reports of the years 2005-2008.