



# **Final Quality Report**

## **Survey on Income and Living Conditions Spain (Spanish ECV 2007)**

**Madrid, November 2009**

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## **INTRODUCTION**

This Report complies with Article 16 of the Regulation of the European Parliament and of the Council of 16 June 2003 concerning Community statistics on income and living conditions (EU-SILC).

Article 16 requires that by the end of the year N+2 Member States produce a final quality report on the longitudinal component of the statistical operation.

To implement Article 16, the Commission made a Regulation on the detailed content of the intermediate and final quality reports. The Commission also drew up a technical document to further specify and clarify the content of quality reports.

This Report provides information on accuracy, comparability and coherence with external sources.

The gross and net figures are provided for the 2007 Spanish microdata.

## **1. EUROPEAN UNION COMMON LONGITUDINAL INDICATORS**

### **1.1. European Union common longitudinal indicators based on the longitudinal component of EU-SILC**

Pending on the definition of the longitudinal indicators.

### **1.2. Other indicators**

Not applicable

## 2. ACCURACY

### 2.1. Sample design

#### 2.1.1. Type of sample design

The Survey on Income and Living Conditions (Spanish “ECV”) is an annual survey with a rotational-group design. The sample comprises four independent sub-samples, each of which is a four-year panel. Each year, the sample is rotated in one of the panels.

Each sub-sample is selected following a two-stage design; the first-stage units are stratified. The first stage is made up of census sections. The second stage comprises main family addresses. There was no sub-sampling within those units; all households usually residing in those addresses were surveyed.

#### 2.1.2. Sampling units

The first-stage units are census sections. Each section is made up of around 400 addresses.

The second-stage units are the principal family addresses selected for the sample in the census section.

#### 2.1.3. Stratification and sub-stratification criteria

In each Autonomous Community [self-ruling region], first-stage units were **stratified** by the size of the municipality to which the census section belonged.

The following strata were considered:

**Stratum 0:** Municipalities of over 500,000 population.

**Stratum 1:** Provincial capitals (other than the above).

**Stratum 2:** Municipalities of over 100,000 population (other than the above).

**Stratum 3:** Municipalities of 50,000 to 100,000 population (other than the above).

**Stratum 4:** Municipalities of 20,000 to 50,000 population (other than the above).

**Stratum 5:** Municipalities of 10,000 to 20,000 population.

**Stratum 6:** Municipalities of under 10,000 population.

An independent sample was designed in each Autonomous Community to represent it, because one of INE’s survey objectives is to provide data at this level of disaggregation.

#### 2.1.4. Sample size and allocation criteria

To achieve the survey objective of producing acceptably reliable estimates at both the national and at the Autonomous Community (regional) level, we selected in 2004 a sample of 16,000 addresses spread over 2000 census sections.

We distributed the sample across Autonomous Communities by allocating one part uniformly and another part in proportion to Autonomous Community size. The uniform part accounted for about 40% of sections.

**Table I. Sample distribution by Autonomous Community**

<b>Autonomous Community</b>	<b>Number of census sections</b>	<b>Number of addresses</b>
Andalusia	240	1,920
Aragon	88	704
Asturias (Principality of)	84	672
Balearic Islands	72	576
Canary Islands	96	768
Cantabria	60	480
Castile-León	132	1,056
Castile-La Mancha	96	768
Catalonia	224	1,792
Valencia	156	1,248
Extremadura	76	608
Galicia	132	1,056
Madrid (Community of)	192	1,536
Murcia (Region of)	76	608
Navarre (Autonomous Community)	60	480
Basque Country	120	960
La Rioja	60	480
Ceuta and Melilla (Autonomous Cities)	36	288
<b>Total</b>	<b>2,000</b>	<b>16,000</b>

In each section, besides the eight addresses selected originally, a further eight were selected as substitutes in case any problem arose with the addresses chosen originally.

The number of sections in each Autonomous Community and stratum group was always a multiple of four, to ensure that all rotations had the same notional-sample distribution across Autonomous Communities and strata. Therefore the number of units considered in the new sub-sample in the current survey is  $\frac{1}{4}$  of the figures included in the table above.

In order to achieve the minimum effective sample size included in the Regulation, the initial sample in the new-sub-sample is 4.000 dwellings. The response rate (including frame invalid addresses – non-residential, unoccupied, etc. -) is about 60%. As substitutions are admitted the final sample in the new-sub-sample is about 4.000 households.

For the other 3 sub-samples (panel component), the sample will consist of the households from the previous wave:  $4.000 + 3.600 + 3.100 = 10.700$  households. Since the estimated response rate is 85%, the final sample in these three groups will be close to 9.100 households.

The design effect in relation to the 'risk of poverty rate' variable is about 1,4 (using wave 1 data). Therefore the final effective sample size is approximately  $(4.000 + 9.100) / 1,4 = 9.350$  households. Comparing this figure with the minimum effective sample size included in the Regulation, 6.500, we see that the minimum sample size is achieved by far in Spain, since the effective sample size included in the Regulation represents 70% out of the effective sample size used in Spain.

### 2.1.5. Sample selection schemes

Census sections were selected in each stratum by a probability in proportion to size (family dwellings). In each section, addresses were selected with equal probability by systematic sampling initiated at random. This procedure produces self-weighted samples in each stratum.

### 2.1.6. Sample distribution over time

There is no itemised distribution for sample collection in the period March-July 2007. The income reference period is fixed (year 2006).

Sample distribution (collected household questionnaire) over the time

		Number	Percentage
March	21 to 31	1170	9.5
April	1 to 10	1034	8.4
	11 to 20	1864	15.1
	21 to 31	1388	11.3
May	1 to 10	1700	13.8
	11 to 20	1171	9.5
	21 to 31	1952	15.8
June	1 to 10	966	7.8
	11 to 20	767	6.2
	21 to 31	242	2.0
July	1 to 10	73	0.6
	11 to 20	2	0.0

### 2.1.7. Renewal of sample: Rotational groups

As indicated earlier, the sample design takes the form of four annual panels: individuals in each panel remain in the sample for four consecutive years. Therefore we divided, in wave 1, the 2000 sections into four groups – called rotational groups – corresponding to the four panels of the sample. Each sub-sample had 500 sections

Every year, we replace all the sample of addresses in the sections belonging to a given rotational group (the sections don't change, new addresses are selected). Hence the year's sample has a three-quarters overlap with the previous year's sample.

The number of sections in each Autonomous Community and stratum group was always a multiple of four, to ensure that all rotations had the same notional sample distribution across Autonomous Communities and strata.

### 2.1.8. Weightings

The complete weighting procedure is described.

#### 2.1.8.1. Weightings in a NEW rotational group

In the first year for the rotational group  $t$ , only cross-sectional factors and estimates need be considered. , for  $t=1, 2, \dots$

### Step 1. Design factor

$$\hat{Y}^{(1,t)} = \sum_h \sum_{j,i \in h} \frac{V_h^{(t-1)}}{vt_h^t} y_{hji}^t = \sum_h \sum_{j,i \in h} \frac{V_h^{(t-1)}}{8 \cdot n_h^t} y_{hji}^t$$

Where:

t is the rotational group;

h is the stratum to which section j belongs;

j is the section;

i is a household.

$V_h^{(t-1)}$  is the total addresses in the municipal register file for t-1 in stratum h.

$n_h^t$  is the allocation of sections in stratum h and rotational group t.

$vt_h^t$  is the initial number of addresses in stratum h in rotational group t, which, by design, is  $8 \cdot n_h^t$ .

$y_{hji}^t$  is the value of the study variable in household i, section j, stratum h, rotational group t.

Therefore, for a household i, section j, stratum h, turn t, the design factor is:

$$w_{hji}^t = \frac{V_h^{(t-1)}}{8 \cdot n_h^t}$$

Given that  $n_h^1 = n_h^2 = n_h^3 = n_h^4$ , as indicated regarding rotational groups, the design factor does not depend on the rotational group.

### Step 2. Non-response adjustments

We adjust for non-response by multiplying the above factor by  $\frac{vt_h^t}{ve_h^t}$ . This provides an estimate of the

inverse probability of response in the stratum, where  $ve_h^t$  is the actual number of addresses in stratum h and rotational group t. We thus have:

$$\hat{Y}^{(2,t)} = \sum_h \hat{Y}_h^{(2,t)} = \sum_h \sum_{j,i \in h} \frac{V_h^{(t-1)}}{ve_h^t} y_{hji}^t$$

### Step 3. Adjustments to external data (ratio estimator)

Using projected population as at the time of the survey as an auxiliary variable, we obtained a separate ratio estimator the chief purpose of which was to enhance the estimate produced by the previous steps by bringing the population figure at the time of sample selection up to date to the time of survey performance. The population figure used refers to 15 February of the current year.

The expression of the estimator is:

$$\hat{Y}^{(3,t)} = \sum_h \frac{\hat{Y}_h^{(2,t)}}{\hat{P}_h^{(2,t)}} P_h$$

i.e.,

$$\hat{Y}^{(3,t)} = \sum_h \frac{\sum_{j,i \in h} \frac{V_h^{(t-1)}}{ve_h^t} y_{hji}^t}{\sum_{j,i \in h} \frac{V_h^{(t-1)}}{ve_h^t} p_{hji}^t} \cdot P_h = \sum_h \sum_{j,i \in h} \frac{P_h}{p_{hji}^t} y_{hji}^t$$

Which can be written down as:

$$\hat{Y}^{(3,t)} = \sum_k w_k^t \cdot y_k^t$$

Where the subscript k represents sample households, and:

$$w_k^t = \frac{P_h}{\sum_{j,i \in h} p_{hji}^t} = \frac{P_h}{p_h^t} \text{ if household k is in stratum h.}$$

$p_h^t$  is the sample population of stratum h, turn t.

$P_h$  is the projected population of stratum h.

$y_k^t$  is the value of the study variable in household k, rotational group t.

#### Step 4. Adjustments to external data (calibration)

The above factor is weighted to adjust estimated distribution to the population distribution by Autonomous Community, age group and gender provided by the Demographic Projections Unit.

We have also adjusted the estimated distribution of households by size to our estimate in the first quarter of the current year for the Labour Force Survey (*Encuesta de Población Activa - EPA*).

For the calibration we used the CALMAR macro designed by the French Institut National de Statistique et Études Economiques (INSEE). We opted for the truncated Logit method with values LO=0.1, UP=10. We considered the following twenty-two groups: Males and females aged 0-15, 16-19, 20-24, 25-34, 35-44, 45-49, 50-54, 55-59, 60-64, 65-74, 75 years and over.

Household distribution by size was: households of 1, 2, 3 or 4 or more members.

In Ceuta and Melilla adjustment groups were fewer because of the small sample size. Specifically, household distribution was not adjusted, and we only considered the following age and gender groups: males and females aged 0-15, 16-24, 25-49, 50-64, 65-74, 75 years and over.

The obtained factor,  $WH_k^t$ , is the household factor. We allocated to all household members their respective household factor  $WP_i^t = WH_k^t$ , if  $i \in k$ .

### 2.1.8.2. Weightings in a PANEL rotational group

As in the previous step, where weights in a new rotational group were calculated, the construction of the weights in a panel rotational group is done in several steps.

#### **Step 1. Calculation of the basic panel weight**

This weight is calculated in each rotational group independently. It collects the inclusion probabilities and non-response or attrition of the panel sample.

For households in the component panel (rotating groups already investigated in previous waves) the basic panel weight is only calculated for the panel persons of the household.

It is calculated from the final cross-sectional weight obtained for the household in wave t-1 ( $WP_i = WH_k$ , si  $i \in k$ ), adjusting due to the attrition of the sample. The adjustment is the inverse of the response probability inside the rotational group, region, age group and gender.

Non-panel persons have a basic panel weight equal to zero.

#### **Step 2. Calculation of the household weight in each rotational group**

The household weight of household h is:

$$w_h^t = \frac{\sum_{j \in h} d_j}{n_h}$$

where:

$d_j$ : is the basic panel weight of the panel person j of the household h.

$n_h$ : is the number of persons (panel and non-panel) aged 14 or more in wave 1, of the household h.

The sum is only for the panel persons of the household.

### 2.1.8.3. Common weightings in NEW and PANEL rotational groups

After having applied the corresponding weightings in the new and panel sub-samples, some other steps need be considered.

#### **Common step 1. Final cross-sectional weights**

The four rotational groups are grouped together. Finally, the factors of the four groups are grouped together by weighting them by the actual number of sample households in each group, by Autonomous Community.

Thus:

$$WH_k = \frac{n_{ca}^t}{n_{ca}} WH_k^t$$

This is the household factor and also the factor for each household member.

Where  $n_{ca}^t$  represents the number of sample households in the Autonomous Community ca and rotational group t, and  $n_{ca}$  represents the household sample size in the Autonomous Community ca

$$(n_{ca} = \sum_{t=1}^4 n_{ca}^t).$$

From 2005 onwards  $\frac{n_{ca}^t}{n_{ca}}$  will be 1/4 and calibration will be carried out at this stage.

## Common step 2. Factor for persons aged 16 and over

The factor is calculated on the basis of the factor for all household persons, in two steps:

1. Correction of non-response in Individual Questionnaires. Using the factor  $WP_i^t$ , we construct the **factor for persons aged 16 and over completing the Individual Questionnaire**, correcting non-response in Individual Questionnaires:

$$WCI_i^t = \frac{\sum_{j \in G_i} WP_j^t}{\sum_{j \in G_i} WP_j^t \cdot R_j} \cdot WP_i^t$$

Where:

- Variable R takes the value 1 for individual j if he/she has completed the questionnaire, and 0 if not.
- $G_j$  is the set of individuals in the same Autonomous Community and age and gender group as questionnaire i. The age and gender groups considered are the 22 groups mentioned for the general case outlined in step 4<sup>1</sup>.

2. Grouping of the four rotational groups. Finally, the factors of the four rotational groups are grouped together by weighting them by the number of Individual Questionnaires in each group, by Autonomous Community.

The factor for persons aged 16 or over completing the Individual Questionnaire is:

$$WCI_i = \frac{ci_{ca}^t}{ci_{ca}} WCI_i^t \text{ for } t = 2004 \text{ and } WCI_i = \frac{\sum_{j \in G_{i_t}} WP_j}{\sum_{j \in G_{i_t}} WP_j \cdot R_j} \cdot WP_i \text{ for } t > 2004$$

<sup>1</sup> Except in Cantabria and the Autonomous Community of Madrid, where groups have been brought together owing to the small sample size.

Where  $ci_{ca}^t$  represents the number of sample Individual Questionnaires in the Autonomous Community  $ca$  and rotational group  $t$ , and  $ci_{ca}$  represents the actual number of sample Individual Questionnaires in the Autonomous Community  $ca$  ( $ci_{ca} = \sum_{t=1}^4 ci_{ca}^t$ ).

#### 2.1.8.4. Final longitudinal weights

The longitudinal analysis is done only for persons and for a concrete period of time.

Taking into account the sample design main characteristics, this analysis covers up to 4 years, since this is the maximum number of periods the households stay in the sample.

The elevation calculation process is similar to the one applied in the cross-sectional.

#### 2.1.9. Substitutions

##### 2.1.9.1. Method of selection of substitutions

In the new sub-sample, in each section, besides the eight addresses selected originally, a further eight were selected in the section as substitutes in case any problem arose with the addresses chosen originally.

Hence the common variable of an address selected originally and its prospective substitute is the census section. There is not other common variable.

There have been multiple substitutions in the sense that further substitutions (until the list of eight substitutes is completely used) have been made for failed substitutions.

The total number of households in D-file in the new sub-sample is 6745 (4006 are original households and 2739 are substituted households). This number includes the substituted households not accepted for database (failed substituted units).

Number of original dwellings and original households in the new sub-sample

	Original units
	Number
Dwellings	4000
Households in same dwellings	6
Total households	4006

Number of original households in the new sub-sample

	Original units
	Number
Households accepted for database	2405
Households failed	1601
Total households	4006

Number of original households in the new sub-sample not accepted in database by colaboration of the substituted unit

	Original units
	Number
Failed original households successfully substituted	1408
Failed original households not successfully substituted	193
Total failed original households	1601

Number of substituted households in the new sub-sample

	Substituted units
	Number
Substituted dwelling accepted in DB	1408
Households in same dwellings	1
Other substituted household accepted in DB	19
Failed substituted household	1311
Total substituted households	2739

There are "Other substituted household accepted in database" because some households initially rejected (and carried out the process of substitutions) were finally recovered. At the end the maximum number of units accepted for database must not exceed 8 (the number of original units selected).

In the tables related to substitutions the original household is linked only to the final substituted household (there can be some intermediate substituted failed households in between).

2.1.9.2. Main characteristics of substituted units compared to original units, by region (NUTS 2), if available

In this point the information is very limited. There are some variables that have been collected using a short questionnaire in field when an original unit has not been accepted, but the non-response rate has been very high.

2.1.9.3. Distribution of substituted units by record of contact at address (DB120), household questionnaire result (DB130) and household interview acceptance (DB135) of the original units

In this table the original household is linked only to the final substituted household (there can be some intermediate substituted failed households in between).

Distribution of substituted units by record of contact at address, household questionnaire result and household interview acceptance of the original units

	Original units	Original units	Substituted units	Substituted units
	Number	Percentage	Number	Percentage
DB120 = 21	65	4.1	57	4.0
DB120 = 22	6	0.4	6	0.4
DB120 = 23	346	21.6	307	21.8
DB130 = 21	706	44.1	622	44.2
DB130 = 22	404	25.2	353	25.1
DB130 = 23	31	1.9	28	2.0
DB130 = 24	43	2.7	35	2.5
Total	1601	100.0	1408	100.0

## 2.2. Sampling errors

For 2007 the data is:

Number of observations

	Number of observations before imputation (partial or total information)	Number of observations after imputation
Total disposable household income	11875	12315
T. d. h. income before s. tr. other than old_age and surv. ben.	11814	12315
T. d. h. income before s. tr. including old_age and surv. ben.	11458	12315
Net income from rental of a property or land	754	792
Family/children-related allowances	421	437
Social exclusion not elsewhere classified	96	100
Housing allowances	136	148
Regular inter-household cash transfer received	387	410
Net interest, div., profit from capital invest. in uninc. business	2625	4309
Net income received by people aged under 16	391	395
Regular taxes on wealth	327	504
Regular inter-household cash transfer paid	720	755
Repayments/receipts for tax adjustments	8110	8645
	Number of observations before imputation (partial or total information)	Number of observations after imputation
Net cash or near cash employee income	11903	13146
Net non-cash employee income	1502	1829
Net cash profits or losses from self-employment	1510	2127
Net pension from individual private plans	163	180
Net unemployment benefits	1343	1430
Net old-age benefits	5503	5730
Net survivors benefits	475	483
Net sickness benefits	452	487
Net disability benefits	594	616
Education-related allowances	539	564
Gross monthly earnings for employees	10534	11207

Number of observations (before and after imputation) by household size (equivalised disposable income)

	Number of observations before imputation (partial or total information)	Number of observations after imputation
Total	33287	34490
1 member	1993	2084
2 members	6829	7089
3 members	8260	8515
4 and more members	16205	16802

Number of observations (before and after imputation) by age (equivalised disposable income)

	Number of observations before imputation (partial or total information)	Number of observations after imputation
Total	33287	34490
0 le age le 24	9092	9442
25 le age le 34	4551	4691
35 le age le 44	5099	5283
45 le age le 54	4754	4941
55 le age le 64	3896	4097
65 le age	5895	6036

Number of observations (before and after imputation) by sex (equivalised disposable income)

	Number of observations before imputation (partial or total information)	Number of observations after imputation
Total	33287	34490
Males	16092	16664
Females	17195	17826

Mean of household income components

	Mean
Total disposable household income	24606
T. d. h. income before s. tr. other than old_age and surv. ben.	23427
T. d. h. income before s. tr. including old_age and surv. ben.	18970
Net income from rental of a property or land	6222
Family/children-related allowances	1923
Social exclusion not elsewhere classified	1633
Housing allowances	2066
Regular inter-household cash transfer received	4263
Net interest, div., profit from capital invest. in uninc. business	788
Net income received by people aged under 16	746
Regular taxes on wealth	1383
Regular inter-household cash transfer paid	3186
Repayments/receipts for tax adjustments	-377

Mean of personal income components

	Mean
Net cash or near cash employee income	14135
Net non-cash employee income	1546
Net cash profits or losses from self-employment	10946
Net pension from individual private plans	5264
Net unemployment benefits	3582
Net old-age benefits	9949
Net survivors benefits	6442
Net sickness benefits	4827
Net disability benefits	7566
Education-related allowances	1207
Gross monthly earnings for employees	1626

Mean of the equivalised disposable income by household size

	Mean
Total	13656
1 member	11996
2 members	14608
3 members	14087
4 and more members	13220

Mean of the equivalised disposable income by age

	Mean
Total	13656
0 le age le 24	12920
25 le age le 34	15313
35 le age le 44	14175
45 le age le 54	14544
55 le age le 64	14625
65 le age	11205

Mean of the equivalised disposable income by sex

	Mean
Total	13656
Males	13930
Females	13388

Standard error

**Mean of household income components**

Standard error

**Mean**

Total disposable household income	3,08067
T. d. h. income before s. tr. other than old_age and surv. ben.	3,09058
T. d. h. income before s. tr. including old_age and surv. ben.	3,38446
Net income from rental of a property or land	3,45917
Family/children-related allowances	1,47074
Social exclusion not elsewhere classified	3,75720
Housing allowances	3,65430
Regular inter-household cash transfer received	5,01519
Net interest, div., profit from capital invest. in uninc. business	1,47609
Net income received by people aged under 16	1,11511
Regular taxes on wealth	1,82826
Regular inter-household cash transfer paid	2,32911
Repayments/receipts for tax adjustments	0,35037

**Mean of personal income components**

**Mean**

Net cash or near cash employee income	1,77388
Net non-cash employee income	0,79614
Net cash profits or losses from self-employment	5,96766
Net pension from individual private plans	6,41080
Net unemployment benefits	1,86783
Net old-age benefits	1,53306
Net survivors benefits	3,75815
Net sickness benefits	2,93629
Net disability benefits	4,15735
Education-related allowances	1,51185
Gross monthly earnings for employees	0,20269

**Mean of the equivalised disposable income by household size**

**Mean**

Total	1,63783
1 member	4,08419
2 members	3,99864
3 members	2,65097
4 and more members	2,56636

### Mean of the equivalised disposable income by age

#### Mean

<b>Total</b>	1,63783
<b>0 le age le 24</b>	2,42344
<b>25 le age le 34</b>	3,70407
<b>35 le age le 44</b>	2,80590
<b>45 le age le 54</b>	2,98793
<b>55 le age le 64</b>	4,17045
<b>65 le age</b>	2,17938

### Mean of the equivalised disposable income by sex

#### Mean

<b>Total</b>	1,63783
<b>Males</b>	1,80769
<b>Females</b>	1,66780

## 2.3. Non-sampling errors

### 2.3.1. Sampling frame and coverage errors

The sample selection frame was area-based and consisted of the list of census sections used in the Municipal Register (population register).

The new sample for SILC-2007 was obtained with the Register dated 09.09.2006.

The **Municipal Register** [*Padrón*] is an administrative record of the residents in a municipality. The Municipal Register is formed, maintained, reviewed and kept by each municipality. It is continually updated.

All persons residing in Spain must appear in the Municipal Register of the municipality where they usually live. A person living in more than one municipality must register only in the one where he/she lives longest in the year.

Municipal Register entries contain only the following mandatory details on each resident:

- a) Name
- b) Sex
- c) Usual address
- d) Nationality
- e) Place and date of birth
- f) Identity Card Number or, if foreign, an equivalent identifying document

The percentage of addresses does not exist or is non-residential address or is unoccupied is:

Percentage of address does not exist or is non-residential or is unoccupied or not principal residence (DB120 = 23) over the total original address (household) selected

Percentage

8.6

### 2.3.2.1. Measurement errors

We constructed the questionnaire so as to elicit sufficient information to determine the target variables set forth in the Commission Regulation. We did not include additional questions to cover other areas at the national level.

We applied the experience of previous operations to improve the questionnaire. Apart from the previous waves questionnaires, the experience of the European Community Household Panel and, more particularly, the experience of the Pilot Survey on Living Conditions (2002) has helped to the configuration of the current questionnaire.

The questionnaire design was worked on by experts of the originating unit and of the IT and Fieldwork departments. It was then reviewed by experts working on other surveys. The questionnaire was later tested by various people.

We have updated the questionnaire on an ongoing basis in response to the final reports of the 38 Area Heads in charge of fieldwork.

Training followed a cascade pattern. We first ran a course in Madrid for the 38 Area Heads, divided into 2 groups. At their Provincial Offices Area Heads then taught a one-week course to their staff using a range of training manuals.

A section was assigned to each interviewer and fieldwork began. Inspectors revisited some households on the basis of any difficulties found.

#### 2.3.2.2. Processing errors

Questionnaires are completed by CAPI (Compute Aided Personal Interviewing). This procedure has been implemented since 2005 (in 2004 questionnaires were completed by PAPI).

After data collection, we then apply a range of checks developed at INE to ensure data consistency. The phases of these checks are:

- 1) Households coverage
- 2) Persons coverage
- 3) Inconsistencies among tables
- 4) Control of duplicates
- 5) Household identification check
- 6) Person identification check
- 7) Monitoring of flows, valid values and out-of-range values
- 8) Intra-year inconsistencies check
  - 8.1 Intra-questionnaire inconsistencies check
  - 8.2 Inter-questionnaire inconsistencies check
- 9) Follow-up of households and persons

We convert the data to the format required by Eurostat and apply the set of checks developed by Eurostat.

Due to the mode of collection (CAPI), some of the traditional sources of errors have disappeared or have been reduced.

The main source of error was flow path. Errors in direct questions on income were few.

### 2.3.3. Non-response errors

#### 2.3.3.1. Achieved sample size

Longitudinal component. Achieved sample size

SILC 2004. Number of households for which an interview is accepted for the database (DB135 = 1). Rotational group breakdown

	Number
Group 4	3818
Total	3818

SILC 2004. Number of persons 16 years or older who are members of the households for which the interview is accepted for the database (DB135 = 1), and who completed a personal interview (RB250 = 11 to 13).

	Number
Group 4	7875
Total	7875

SILC 2005. Number of households for which an interview is accepted for the database (DB135 = 1). Rotational group breakdown

	Number
Group 1	3699
Group 4	3070
Total	6769

SILC 2005. Number of persons 16 years or older who are members of the households for which the interview is accepted for the database (DB135 = 1), and who completed a personal interview (RB250 = 11 to 13).

	Number
Group 1	8380
Group 4	7242
Total	15622

SILC 2006. Number of households for which an interview is accepted for the database (DB135 = 1). Rotational group breakdown

	Number
Group 1	3004
Group 2	3650
Group 4	2744
Total	9398

SILC 2006. Number of persons 16 years or older who are members of the households for which the interview is accepted for the database (DB135 = 1), and who completed a personal interview (RB250 = 11 to 13).

Number	
Group 1	6900
Group 2	8202
Group 4	6454
Total	21556

SILC 2007. Number of households for which an interview is accepted for the database (DB135 = 1). Rotational group breakdown

Number	
Group 1	2851
Group 2	3052
Group 4	2593
Total	8496

SILC 2007. Number of persons 16 years or older who are members of the households for which the interview is accepted for the database (DB135 = 1), and who completed a personal interview (RB250 = 11 to 13).

Number	
Group 1	6619
Group 2	7068
Group 4	6145
Total	19832

### 2.3.3.2. Unit non-response

Unit non-response. Rotational group

	Group 1 (2005)	Group 2 (2006)	Group 4 (2004)
Ra	0.97	0.97	0.98
Rh	0.59	0.58	0.64
NRh	42.21	43.13	37.56
Rp	0.97	0.97	0.84
NRp	3.15	3.04	16.06
NRp2	44.04	44.86	47.59

Ra-Proportion of address contact

Rh-Proportion of complete household interv. accepted for the database

NRh-Household non-response rate

Rp-Proportion of complete personal interv. within the households accepted for the database

NRp-Individual non-response rate

NRp2-Overall individual non-response rate

## HOUSEHOLDS

Longitudinal component. Unit non-response. Waves 1 - 2. Households.

Household response rates: Comparison of results codes between wave 2 and wave 1 (SILC 2004- 2005). Rotational group and total

Group 4

	DB130=11 and DB135=1	DB130=11 and DB135=2	DB130=22	DB130=23	DB130=24	DB130=21	DB110=3,4,- 5,6,7	Total
DB130=11 and DB135=1	2990	8	204	16	23	444	133	3818
DB110=8 (wave 2)	80	.	24	.	.	20	.	124
Total	3070	8	228	16	23	464	133	3942

Total

	DB130=11 and DB135=1	DB130=11 and DB135=2	DB130=22	DB130=23	DB130=24	DB130=21	DB110=3,4,- 5,6,7	Total
DB130=11 and DB135=1	2990	8	204	16	23	444	133	3818
DB110=8 (wave 2)	80	.	24	.	.	20	.	124
Total	3070	8	228	16	23	464	133	3942

Wave response rates. Rotational group and total (SILC 2004- 2005). Percentages.

	Wave response rate	Refusal rate	No- contacted and others
Group 4	77.88	11.77	10.35
Total	77.88	11.77	10.35

Longitudinal follow-up rates. Rotational group and total (SILC 2004- 2005). Percentages.

	Longitudinal follow-up rate
Group 4	84.89
Total	84.89

Follow-up ratio. Rotational group and total (SILC 2004- 2005)

	Follow-up ratio
Group 4	0.88
Total	0.88

Achieved sample size ratio. Rotational group and total (SILC 2004- 2005)

	Achieved sample size ratio
Group 4	0.80
Total	0.80

Household response rates: Comparison of results codes between wave 2 and wave 1 (SILC 2005- 2006). Rotational group and total

Group 1

	DB130=11 and DB135=1	DB130=11 and DB135=2	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	DB110=3,4,- 5,6,7	Total
DB130=11 and DB135=1	2946	9	183	29	28	408	.	96	3699
DB110=8 (wave 2)	58	.	9	.	.	10	6	.	83
Total	3004	9	192	29	28	418	6	96	3782

Total

	DB130=11 and DB135=1	DB130=11 and DB135=2	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	DB110=3,4,- 5,6,7	Total
DB130=11 and DB135=1	2946	9	183	29	28	408	.	96	3699
DB110=8 (wave 2)	58	.	9	.	.	10	6	.	83
Total	3004	9	192	29	28	418	6	96	3782

Wave response rates. Rotational group and total (SILC 2005- 2006). Percentages.

	Wave response rate	Refusal rate	No- contacted and others
Group 1	79.43	11.05	9.52
Total	79.43	11.05	9.52

Longitudinal follow-up rates. Rotational group and total (SILC 2005- 2006). Percentages.

	Longitudinal follow-up rate
Group 1	86.37
Total	86.37

Follow-up ratio. Rotational group and total (SILC 2005- 2006)

	Follow-up ratio
Group 1	0.88
Total	0.88

Achieved sample size ratio. Rotational group and total (SILC 2005- 2006)

	Achieved sample size ratio
Group 1	0.81
Total	0.81

Household response rates: Comparison of results codes between wave 2 and wave 1 (SILC 2006- 2007). Rotational group and total

Group 2

	DB130=11 and DB135=1	DB130=11 and DB135=2	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	DB110=3,4,- 5,6,7	DB110=10	Total
DB130=11 and DB135=1	2998	4	141	26	21	380	.	79	1	3650
DB110=8 (wave 2)	54	.	12	.	3	4	6	.	.	79
Total	3052	4	153	26	24	384	6	79	1	3729

Total

	DB130=11 and DB135=1	DB130=11 and DB135=2	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	DB110=3,4,- 5,6,7	DB110=10	Total
DB130=11 and DB135=1	2998	4	141	26	21	380	.	79	1	3650
DB110=8 (wave 2)	54	.	12	.	3	4	6	.	.	79
Total	3052	4	153	26	24	384	6	79	1	3729

Wave response rates. Rotational group and total (SILC 2006- 2007). Percentages.

	Wave response rate	Refusal rate	No- contacted and others
Group 2	81.84	10.30	7.86
Total	81.84	10.30	7.86

Longitudinal follow-up rates. Rotational group and total (SILC 2006- 2007). Percentages.

	Longitudinal follow-up rate
Group 2	87.40
Total	87.40

Follow-up ratio. Rotational group and total (SILC 2006- 2007)

	Follow-up ratio
Group 2	0.89
Total	0.89

Achieved sample size ratio. Rotational group and total (SILC 2006- 2007)

	Achieved sample size ratio
Group 2	0.84
Total	0.84

Longitudinal component. Unit non-response. Waves t , t+1. Households.

Household response rates: Comparison of results codes between wave 2 and wave 3 (SILC 2005- 2006). Rotational group and total

Group 4

	DB130=11 and DB135=1	DB130=11 and DB135=2	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	DB110=3,4,- 5,6,7	DB110=10	Total
DB130=11 and DB135=1	2526	8	125	14	21	309	.	65	2	3070
DB130=11 and DB135=2	6	1	1	.	.	.	.	.	.	8
DB130=22	131	2	35	.	5	28	.	27	.	228
DB130=23	10	.	1	2	.	1	.	2	.	16
DB130=24	11	.	3	.	.	7	.	2	.	23
DB110=8 (wave 3)	60	.	15	.	8	7	8	.	.	98
Total	2744	11	180	16	34	352	8	96	2	3443

Total

	DB130=11 and DB135=1	DB130=11 and DB135=2	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	DB110=3,4,- 5,6,7	DB110=10	Total
DB130=11 and DB135=1	2526	8	125	14	21	309	.	65	2	3070
DB130=11 and DB135=2	6	1	1	.	.	.	.	.	.	8
DB130=22	131	2	35	.	5	28	.	27	.	228
DB130=23	10	.	1	2	.	1	.	2	.	16
DB130=24	11	.	3	.	.	7	.	2	.	23
DB110=8 (wave 3)	60	.	15	.	8	7	8	.	.	98
Total	2744	11	180	16	34	352	8	96	2	3443

Wave response rates. Rotational group and total (SILC 2005- 2006). Percentages.

	Wave response rate	Refusal rate	No- contacted and others
Group 4	79.70	10.22	10.08
Total	79.70	10.22	10.08

Longitudinal follow-up rates. Rotational group and total (SILC 2005- 2006). Percentages.

	Longitudinal follow-up rate
Group 4	85.26
Total	85.26

Follow-up ratio. Rotational group and total (SILC 2005- 2006)

	Follow-up ratio
Group 4	0.88
Total	0.88

Achieved sample size ratio. Rotational group and total (SILC 2005- 2006)

	Achieved sample size ratio
Group 4	0.89
Total	0.89

Household response rates: Comparison of results codes between wave 3 and wave 4 (SILC 2006- 2007). Rotational group and total

Group 1

	DB130=11 and DB135=1	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	DB110=3,4,- 5,6,7	DB110=10	Total
DB130=11 and DB135=1	2617	84	13	8	235	.	47	.	3004
DB130=11 and DB135=2	6	.	.	.	3	.	.	.	9
DB130=22	123	17	2	.	30	.	19	1	192
DB130=23	18	2	3	.	1	.	5	.	29
DB130=24	13	5	1	2	6	.	1	.	28
DB110=8 (wave 3)	74	16	1	1	6	8	.	.	106
Total	2851	124	20	11	281	8	72	1	3368

Group 4

	DB130=11 and DB135=1	DB130=11 and DB135=2	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	DB110=3,4,- 5,6,7	DB110=10	Total
DB130=11 and DB135=1	2436	3	83	13	14	151	.	43	1	2744
DB130=11 and DB135=2	4	.	.	1	.	3	.	.	.	8
DB130=22	88	1	12	2	1	20	.	14	2	140
DB130=23	5	1	1	.	1	5	.	1	.	14

DB130=24	11	.	3	.	3	7	.	5	.	29
DB110=8 (wave 3)	49	.	8	.	2	3	9	.	.	71
Total	2593	5	107	16	21	189	9	63	3	3006

Total

	DB130=11 and DB135=1	DB130=11 and DB135=2	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	DB110=3,4,- 5,6,7	DB110=10	Total
DB130=11 and DB135=1	5053	3	167	26	22	386	.	90	1	5748
DB130=11 and DB135=2	10	.	.	1	.	6	.	.	.	17
DB130=22	211	1	29	4	1	50	.	33	3	332
DB130=23	23	1	3	3	1	6	.	6	.	43
DB130=24	24	.	8	1	5	13	.	6	.	57
DB110=8 (wave 3)	123	.	24	1	3	9	17	.	.	177
Total	5444	5	231	36	32	470	17	135	4	6374

Wave response rates. Rotational group and total (SILC 2006- 2007). Percentages.

	Wave response rate	Refusal rate	No- contacted and others
Group 1	84.65	8.34	7.01
Group 4	86.26	6.29	7.45
Total	85.41	7.37	7.22

Longitudinal follow-up rates. Rotational group and total (SILC 2006- 2007). Percentages.

	Longitudinal follow-up rate
Group 1	88.35
Group 4	90.53
Total	89.38

Follow-up ratio. Rotational group and total (SILC 2006- 2007)

	Follow-up ratio
Group 1	0.91
Group 4	0.93
Total	0.92

Achieved sample size ratio. Rotational group and total (SILC 2006- 2007)

	Achieved sample size ratio
Group 1	0.95
Group 4	0.94
Total	0.95

PERSONS

Longitudinal component. Unit non-response. Persons

Personal interview response rates: Rotational group and total. (SILC 2004- 2005).

Group 4

Sample persons (rb100=1 and rb245 in (1,2,3)) from the sample forwarded  
from last wave (t-1)

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=32	RB250=33	Total
RB110 in (1,2)	7101	6	47	42	45	47	7288

Total

Sample persons (rb100=1 and rb245 in (1,2,3)) from the sample forwarded  
from last wave (t-1)

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=32	RB250=33	Total
RB110 in (1,2)	7101	6	47	42	45	47	7288

Personal interview response rates: Rotational group and total. (SILC 2004- 2005).

Group 4

Non-sample persons 16+

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=32	RB250=33	Total
This wave	141	1	6	1	3	6	158

Total

Non-sample persons 16+

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=32	RB250=33	Total
This wave	141	1	6	1	3	6	158

Response rates for persons. Wave response rate. Rotational group and total. Percentages. (SILC 2004- 2005).

	Wave response rate of sample persons
Group 4	97.43
Total	97.43

Response rates for persons. Longitudinal follow-up rate. Rotational group and total. Percentages. (SILC 2004- 2005).

	Longitudinal follow-up rate	Rate (RB250=21)	Rate (RB250=22)	Rate (RB250=23)	Rate (RB250=31)	Rate (RB250=32)	Rate (RB250=33)
Group 4	97.43	0.08	0.00	0.64	0.58	0.62	0.64
Total	97.43	0.08	0.00	0.64	0.58	0.62	0.64

Response rates for persons. Response rate for non-sample persons. Rotational group and total. (SILC 2004- 2005).

	Response rate for non sample persons
Group 4	89.24
Total	89.24

Achieved sample size ratio. Rotational group and total. (SILC 2004- 2005).

	Achieved sample size ratio for sample persons	Achieved sample size ratio for sample persons and co-residents
Group 4	90.17	91.96
Total	90.17	91.96

Personal interview response rates: Rotational group and total. (SILC 2005- 2006).

Group 1

Sample persons (rb100=1 and rb245 in (1,2,3)) from the  
sample forwarded from last wave (t-1)

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=33	Total
RB110 in (1,2)	6721	8	67	24	58	6878

Total

Sample persons (rb100=1 and rb245 in (1,2,3)) from the  
sample forwarded from last wave (t-1)

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=33	Total
RB110 in (1,2)	6721	8	67	24	58	6878

Personal interview response rates: Rotational group and total. (SILC 2005- 2006).

Group 1

Non-sample persons 16+

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=33	Total
This wave	179	1	7	4	7	198

Total

Non-sample persons 16+

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=33	Total
This wave	179	1	7	4	7	198

Response rates for persons. Wave response rate. Rotational group and total. Percentages. (SILC 2005- 2006).

	Wave response rate of sample persons
Group 1	97.72
Total	97.72

Response rates for persons. Longitudinal follow-up rate. Rotational group and total. Percentages. (SILC 2005- 2006).

	Longitudinal follow-up rate	Rate (RB250=21)	Rate (RB250=22)	Rate (RB250=23)	Rate (RB250=31)	Rate (RB250=32)	Rate (RB250=33)
Group 1	97.72	0.12	0.00	0.97	0.35	0.00	0.84
Total	97.72	0.12	0.00	0.97	0.35	0.00	0.84

Response rates for persons. Response rate for non-sample persons. Rotational group and total. (SILC 2005- 2006).

	Response rate for non sample persons
Group 1	90.40
Total	90.40

Achieved sample size ratio. Rotational group and total. (SILC 2005- 2006).

	Achieved sample size ratio for sample persons	Achieved sample size ratio for sample persons and co-residents
Group 1	80.20	82.34
Total	80.20	82.34

Personal interview response rates: Rotational group and total. (SILC 2005- 2006).

Group 4

Sample persons (rb100=1 and rb245 in (1,2,3))  
from the sample forwarded from last wave (t-1)

	RB250 = (11,12,13)	RB250=23	RB250=31	RB250=33	Total
RB110 in (1,2)	5871	38	18	42	5969

Total

Sample persons (rb100=1 and rb245 in (1,2,3))  
from the sample forwarded from last wave (t-1)

	RB250 = (11,12,13)	RB250=23	RB250=31	RB250=33	Total
RB110 in (1,2)	5871	38	18	42	5969

Personal interview response rates: Rotational group and total. (SILC 2005- 2006).

Group 4

Non-sample persons 16+

	RB250 = (11,12,13)	RB250=23	RB250=31	RB250=33	Total
This wave	247	7	3	5	262

Total

Non-sample persons 16+

	RB250 = (11,12,13)	RB250=23	RB250=31	RB250=33	Total
This wave	247	7	3	5	262

Response rates for persons. Wave response rate. Rotational group and total. Percentages. (SILC 2005- 2006).

	Wave response rate of sample persons
Group 4	98.36
Total	98.36

Response rates for persons. Longitudinal follow-up rate. Rotational group and total. Percentages. (SILC 2005- 2006).

	Longitudinal follow-up rate	Rate (RB250=21)	Rate (RB250=22)	Rate (RB250=23)	Rate (RB250=31)	Rate (RB250=32)	Rate (RB250=33)
Group 4	98.36	0.00	0.00	0.64	0.30	0.00	0.70
Total	98.36	0.00	0.00	0.64	0.30	0.00	0.70

Response rates for persons. Response rate for non-sample persons. Rotational group and total. (SILC 2005- 2006).

	Response rate for non sample persons
Group 4	94.27
Total	94.27

Achieved sample size ratio. Rotational group and total. (SILC 2005- 2006).

	Achieved sample size ratio for sample persons	Achieved sample size ratio for sample persons and co-residents
Group 4	82.68	84.48
Total	82.68	84.48

Personal interview response rates: Rotational group and total. (SILC 2006- 2007).

Group 2

Sample persons (rb100=1 and rb245 in (1,2,3)) from the sample forwarded from last wave (t-1)

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=32	RB250=33	Total
RB110 in (1,2)	6856	3	22	6	8	8	6903

Total

Sample persons (rb100=1 and rb245 in (1,2,3)) from the sample forwarded from last wave (t-1)

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=32	RB250=33	Total
RB110 in (1,2)	6856	3	22	6	8	8	6903

Personal interview response rates: Rotational group and total. (SILC 2006- 2007).

Group 2

Non-sample persons 16+

	RB250 = (11,12,13)	RB250=33	Total
This wave	212	2	214

Total

Non-sample persons 16+

	RB250 = (11,12,13)	RB250=33	Total
This wave	212	2	214

Response rates for persons. Wave response rate. Rotational group and total. Percentages. (SILC 2006- 2007).

	Wave response rate of sample persons
Group 2	99.32
Total	99.32

Response rates for persons. Longitudinal follow-up rate. Rotational group and total. Percentages. (SILC 2006- 2007).

	Longitudinal follow-up rate	Rate (RB250=21)	Rate (RB250=22)	Rate (RB250=23)	Rate (RB250=31)	Rate (RB250=32)	Rate (RB250=33)
Group 2	99.32	0.04	0.00	0.32	0.09	0.12	0.12
Total	99.32	0.04	0.00	0.32	0.09	0.12	0.12

Response rates for persons. Response rate for non-sample persons. Rotational group and total. (SILC 2006- 2007).

	Response rate for non sample persons
Group 2	99.07
Total	99.07

Achieved sample size ratio. Rotational group and total. (SILC 2006- 2007).

	Achieved sample size ratio for sample persons	Achieved sample size ratio for sample persons and co-residents
Group 2	83.59	86.17
Total	83.59	86.17

Personal interview response rates: Rotational group and total. (SILC 2006- 2007).

Group 1

Sample persons (rb100=1 and rb245 in (1,2,3)) from the sample forwarded from last wave (t-1)

	RB250 = (11,12,13)	RB250=23	RB250=31	RB250=32	RB250=33	Total
RB110 in (1,2)	5974	11	5	3	9	6002

Group 4

Sample persons (rb100=1 and rb245 in (1,2,3)) from the sample forwarded from last wave (t-1)

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=32	RB250=33	Total
RB110 in (1,2)	5535	4	4	5	3	4	5555

Total

Sample persons (rb100=1 and rb245 in (1,2,3)) from the sample forwarded from last wave (t-1)

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=32	RB250=33	Total
RB110 in (1,2)	11509	4	15	10	6	13	11557

Personal interview response rates: Rotational group and total. (SILC 2006- 2007).

Group 1

Non-sample persons 16+

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=33	Total
This wave	312	3	5	1	2	323

Group 4

Non-sample persons 16+

	RB250 = (11,12,13)	RB250=23	RB250=31	RB250=33	Total

This wave	374	8	1	5	388
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Total

Non-sample persons 16+

	RB250 = (11,12,13)	RB250=21	RB250=23	RB250=31	RB250=33	Total
This wave	686	3	13	2	7	711

Response rates for persons. Wave response rate. Rotational group and total. Percentages. (SILC 2006- 2007).

Wave  
response  
rate of  
sample  
persons

Group 1	99.53
Group 4	99.64
Total	99.58

Response rates for persons. Longitudinal follow-up rate. Rotational group and total. Percentages. (SILC 2006- 2007).

	Longitudinal follow-up rate	Rate (RB250=21)	Rate (RB250=22)	Rate (RB250=23)	Rate (RB250=31)	Rate (RB250=32)	Rate (RB250=33)
Group 1	99.53	0.00	0.00	0.18	0.08	0.05	0.15
Group 4	99.64	0.07	0.00	0.07	0.09	0.05	0.07
Total	99.58	0.03	0.00	0.13	0.09	0.05	0.11

Response rates for persons. Response rate for non-sample persons. Rotational group and total. (SILC 2006- 2007).

Response  
rate for non  
sample  
persons

Group 1	96.59
Group 4	96.39
Total	96.48

Achieved sample size ratio. Rotational group and total. (SILC 2006- 2007).

	Achieved sample size ratio for sample persons	Achieved sample size ratio for sample persons and co-residents
Group 1	88.89	91.10
Group 4	89.17	91.56
Total	89.02	91.32

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

Longitudinal component. Distribution of households by DB100, DB120, DB130 and DB135

SILC 2004. Distribution of households by DB110

	Number	Percentage
Total	6653	100.0
DB110=9	6653	100.0

SILC 2004. Distribution of households by DB120

	Number	Percentage
Total	6653	100.0
DB120=11 (contacted)	6010	90.3
DB120=21 (can not be located)	85	1.3
DB120=22 (unable to access)	20	0.3
DB120=23 (not exists or non-res.)	538	8.1

SILC 2004. Distribution of households by DB130

	Number	Percentage
Total	6010	100.0
DB130=11 (household q. completed)	3842	63.9
DB130=21 (refusal to cooperate)	1028	17.1
DB130=22 (temporaly away)	1027	17.1
DB130=23 (unable to respond)	50	0.8
DB130=24 (other reasons)	63	1.0

SILC 2004. Distribution of households by DB135

	Number	Percentage
Total	3842	100.0
DB135=1 (interview accepted)	3818	99.4
DB135=2 (interview rejected)	24	0.6

SILC 2005. Distribution of households by DB110

	Number	Percentage
Total	10920	100.0
DB110=1	3599	33.0
DB110=2	86	0.8
DB110=3	6	0.1
DB110=4	8	0.1
DB110=5	16	0.1
DB110=6	1	0.0
DB110=7	102	0.9
DB110=8	126	1.2
DB110=9	6976	63.9

SILC 2005. Distribution of households by DB120

	Number	Percentage
Total	7188	100.0
DB120=11 (contacted)	6439	89.6
DB120=21 (can not be located)	155	2.2
DB120=22 (unable to access)	17	0.2
DB120=23 (not exists or non-res.)	575	8.0
(Missing)	2	0.0

SILC 2005. Distribution of households by DB130

	Number	Percentage
Total	10038	100.0
DB130=11 (household q. completed)	6780	67.5
DB130=21 (refusal to cooperate)	1642	16.4
DB130=22 (temporaly away)	1344	13.4
DB130=23 (unable to respond)	59	0.6
DB130=24 (other reasons)	213	2.1

SILC 2005. Distribution of households by DB135

	Number	Percentage
Total	6780	100.0
DB135=1 (interview accepted)	6769	99.8
DB135=2 (interview rejected)	11	0.2

SILC 2006. Distribution of households by DB110

	Number	Percentage
Total	14162	100.0
DB110=1	6707	47.4
DB110=2	143	1.0
DB110=3	12	0.1
DB110=4	6	0.0
DB110=5	17	0.1
DB110=6	8	0.1
DB110=7	149	1.1
DB110=8	181	1.3
DB110=9	6937	49.0
DB110=10	2	0.0

SILC 2006. Distribution of households by DB120

	Number	Percentage
Total	7261	100.0
DB120=11 (contacted)	6567	90.4
DB120=21 (can not be located)	167	2.3
DB120=22 (unable to access)	8	0.1
DB120=23 (not exists or non-res.)	519	7.1

SILC 2006. Distribution of households by DB130

	Number	Percentage
Total	13274	100.0
DB130=11 (household q. completed)	9423	71.0
DB130=21 (refusal to cooperate)	1963	14.8
DB130=22 (temporaly away)	1572	11.8
DB130=23 (unable to respond)	93	0.7
DB130=24 (other reasons)	223	1.7

SILC 2006. Distribution of households by DB135

	Number	Percentage
Total	9423	100.0
DB135=1 (interview accepted)	9398	99.7
DB135=2 (interview rejected)	25	0.3

SILC 2007. Distribution of households by DB110

	Number	Percentage
Total	10103	100.0
DB110=1	9404	93.1
DB110=2	224	2.2
DB110=3	22	0.2
DB110=4	8	0.1
DB110=5	36	0.4
DB110=6	7	0.1
DB110=7	141	1.4
DB110=8	256	2.5
DB110=10	5	0.0

SILC 2007. Distribution of households by DB120

	Number	Percentage
Total	480	100.0
DB120=11 (contacted)	457	95.2
DB120=21 (can not be located)	23	4.8

SILC 2007. Distribution of households by DB130

	Number	Percentage
Total	9861	100.0
DB130=11 (household q. completed)	8505	86.2
DB130=21 (refusal to cooperate)	854	8.7
DB130=22 (temporarily away)	384	3.9
DB130=23 (unable to respond)	62	0.6
DB130=24 (other reasons)	56	0.6

SILC 2007. Distribution of households by DB135

	Number	Percentage
Total	8505	100.0
DB135=1 (interview accepted)	8496	99.9
DB135=2 (interview rejected)	9	0.1

### 2.3.3.4. Distribution of persons for membership status (RB110)

Distribution of persons for membership status (RB110)

SILC 2005. Distribution of person for membership status (RB110)

		Number	Percentage
Total		19591	100.0
Current hhd members	RB110=1	19022	97.1
	RB110=2	92	0.5
	RB110=3	179	0.9
	RB110=4	81	0.4
No current hhd members	RB120=2 to 4	135	0.7
	RB110=6	61	0.3
	RB110=7	21	0.1

SILC 2005. Distribution of person for membership status (RB110). RB110=5

		Number	Percentage
Total		274	100.0
RB120=1 and current hhd member		91	33.2
RB120=1 and no current hhd member		48	17.5
RB120=2		6	2.2
RB120=3		7	2.6
RB120=4		122	44.5

SILC 2006. Distribution of person for membership status (RB110)

		Number	Percentage
Total		26984	100.0
Current hhd members	RB110=1	25886	95.9
	RB110=2	156	0.6
	RB110=3	432	1.6
	RB110=4	116	0.4
No current hhd members	RB120=2 to 4	194	0.7
	RB110=6	94	0.3
	RB110=7	106	0.4

SILC 2006. Distribution of person for membership status (RB110). RB110=5

		Number	Percentage
Total		434	100.0
RB120=1 and current hhd member		152	35.0
RB120=1 and no current hhd member		88	20.3
RB120=2		11	2.5
RB120=3		12	2.8
RB120=4		171	39.4

SILC 2007. Distribution of person for membership status (RB110)

		Number	Percentage
Total		24490	100.0
Current hhd members	RB110=1	22979	93.8
	RB110=2	220	0.9
	RB110=3	604	2.5
	RB110=4	183	0.7
No current hhd members	RB110=2 to 4	329	1.3
	RB110=6	127	0.5
	RB110=7	48	0.2

SILC 2007. Distribution of person for membership status (RB110). RB110=5

		Number	Percentage
Total		651	100.0
RB120=1 and current hhd member		208	32.0
RB120=1 and no current hhd member		114	17.5
RB120=2		21	3.2
RB120=3		36	5.5
RB120=4		272	41.8

### 2.3.3.5. Item non-response

Longitudinal component. Item non-response. Net amounts.

SILC 2004. Distribution of item non-response. Net amounts.

	% households having received an amount	% households with missing values (before imputation)	% households with partial information (before imputation)	% households with total information (before imputation)
Total disposable household income	99.7	7.1	35.6	57.2
T. d. h. income before s. tr. other than old_age and surv. ben.	98.8	7.7	35.1	57.2
T. d. h. income before s. tr. including old_age and surv. ben.	89.4	11.4	35.8	52.8
Net income from rental of a property or land	5.9	1.3	0.0	98.7
Family/children-related allowances	5.3	2.5	14.4	83.2
Social exclusion not elsewhere classified	0.7	3.8	0.0	96.2
Housing allowances	0.7	0.0	0.0	100.0
Regular inter-household cash transfer received	3.0	3.5	0.0	96.5
Net interest, div., profit from capital invest. in uninc. business	34.7	38.5	14.4	47.1
Net income received by people aged under 16	4.0	0.0	0.0	100.0
Regular taxes on wealth	4.4	4.2	50.3	45.5
Regular inter-household cash transfer paid	5.7	6.9	0.0	93.1
Repayments/receipts for tax adjustments	66.1	4.8	26.5	68.7
		% persons with missing values (before imputation)	% persons with partial information (before imputation)	% persons with total information (before imputation)
Net cash or near cash employee income	44.0	9.4	0.0	90.6
Net non-cash employee income	0.7	12.5	7.1	80.4
Net cash profits or losses from self-employment	7.5	24.4	43.8	31.7
Net pension from individual private plans	0.7	3.8	0.0	96.2
Net unemployment benefits	5.7	1.8	0.0	98.2
Net old-age benefits	20.2	1.8	0.2	98.0
Net survivors benefits	1.8	0.7	0.0	99.3
Net sickness benefits	1.1	1.1	0.0	98.9
Net disability benefits	2.3	2.2	0.0	97.8
Education-related allowances	1.3	6.7	0.0	93.3

SILC 2005. Distribution of item non-response. Net amounts.

	% households having received an amount	% households with missing values (before imputation)	% households with partial information (before imputation)	% households with total information (before imputation)
Total disposable household income	99.6	5.4	39.8	54.7
T. d. h. income before s. tr. other than old_age and surv. ben.	98.7	5.9	39.3	54.8
T. d. h. income before s. tr. including old_age and surv. ben.	88.3	10.2	37.9	51.9
Net income from rental of a property or land	6.0	6.2	13.8	80.0
Family/children-related allowances	3.1	1.4	1.4	97.1
Social exclusion not elsewhere classified	0.6	0.0	0.0	100.0
Housing allowances	0.7	4.0	0.0	96.0
Regular inter-household cash transfer received	2.2	10.5	0.0	89.5
Net interest, div., profit from capital invest. in uninc. business	29.0	43.9	33.2	22.9
Net income received by people aged under 16	3.8	0.4	0.0	99.6
Regular taxes on wealth	3.6	32.8	12.7	54.5
Regular inter-household cash transfer paid	4.8	6.1	0.0	93.9
Repayments/receipts for tax adjustments	68.3	7.1	5.1	87.9

  

	% persons 16+ having received an amount	% persons with missing values (before imputation)	% persons with partial information (before imputation)	% persons with total information (before imputation)
Net cash or near cash employee income	43.6	13.0	0.0	87.0
Net non-cash employee income	0.5	29.4	1.2	69.4
Net cash profits or losses from self-employment	8.1	40.5	34.1	25.4
Net pension from individual private plans	0.4	8.2	0.0	91.8
Net unemployment benefits	5.1	5.8	0.0	94.2
Net old-age benefits	19.2	6.4	0.2	93.4
Net survivors benefits	1.7	3.5	0.0	96.5
Net sickness benefits	1.3	13.5	0.0	86.5
Net disability benefits	2.2	2.9	0.0	97.1
Education-related allowances	1.7	5.2	0.0	94.8

SILC 2006. Distribution of item non-response. Net amounts.

	% households having received an amount	% households with missing values (before imputation)	% households with partial information (before imputation)	% households with total information (before imputation)
Total disposable household income	99.6	4.8	36.5	58.8
T. d. h. income before s. tr. other than old_age and surv. ben.	98.7	5.4	35.6	59.0
T. d. h. income before s. tr. including old_age and surv. ben.	87.2	9.1	35.9	55.0
Net income from rental of a property or land	5.4	10.7	13.3	75.9
Family/children-related allowances	3.3	4.9	1.9	93.2
Social exclusion not elsewhere classified	0.7	6.3	0.0	93.8
Housing allowances	0.8	9.0	0.0	91.0
Regular inter-household cash transfer received	2.4	10.0	0.0	90.0
Net interest, div., profit from capital invest. in uninc. business	27.8	44.6	33.5	22.0
Net income received by people aged under 16	3.9	2.2	0.0	97.8
Regular taxes on wealth	3.8	36.1	13.2	50.7
Regular inter-household cash transfer paid	5.5	5.4	0.0	94.6
Repayments/receipts for tax adjustments	67.2	7.8	5.1	87.1

  

	% persons 16+ having received an amount	% persons with missing values (before imputation)	% persons with partial information (before imputation)	% persons with total information (before imputation)
Net cash or near cash employee income	44.2	12.4	0.0	87.6
Net non-cash employee income	0.7	25.2	0.0	74.8
Net cash profits or losses from self-employment	8.0	30.2	40.6	29.2
Net pension from individual private plans	0.6	11.0	0.0	89.0
Net unemployment benefits	4.9	6.8	0.1	93.1
Net old-age benefits	20.0	5.5	0.3	94.3
Net survivors benefits	1.6	5.6	0.0	94.4
Net sickness benefits	1.6	9.1	0.0	90.9
Net disability benefits	1.9	3.4	0.0	96.6
Education-related allowances	1.3	5.8	0.0	94.2

SILC 2007. Distribution of item non-response. Net amounts.

	% households having received an amount	% households with missing values (before imputation)	% households with partial information (before imputation)	% households with total information (before imputation)
Total disposable household income	99.6	2.8	38.5	58.7
T. d. h. income before s. tr. other than old_age and surv. ben.	98.9	3.2	37.7	59.1
T. d. h. income before s. tr. including old_age and surv. ben.	89.4	6.8	37.1	56.1
Net income from rental of a property or land	6.5	4.0	10.5	85.6
Family/children-related allowances	3.8	4.4	0.6	95.0
Social exclusion not elsewhere classified	0.9	3.9	0.0	96.1
Housing allowances	1.3	8.8	0.0	91.2
Regular inter-household cash transfer received	3.2	5.1	0.0	94.9
Net interest, div., profit from capital invest. in uninc. business	35.8	36.1	38.4	25.5
Net income received by people aged under 16	3.2	1.1	0.0	98.9
Regular taxes on wealth	4.3	33.4	13.3	53.3
Regular inter-household cash transfer paid	6.3	3.4	0.0	96.6
Repayments/receipts for tax adjustments	71.2	5.8	2.3	91.9

  

	% persons 16+ having received an amount	% persons with missing values (before imputation)	% persons with partial information (before imputation)	% persons with total information (before imputation)
Net cash or near cash employee income	45.8	7.8	0.0	92.2
Net non-cash employee income	1.0	13.0	0.0	87.0
Net cash profits or losses from self-employment	7.8	27.5	39.8	32.7
Net pension from individual private plans	0.7	8.1	0.0	91.9
Net unemployment benefits	5.1	5.4	0.0	94.6
Net old-age benefits	20.0	3.0	0.3	96.7
Net survivors benefits	1.7	1.2	0.0	98.8
Net sickness benefits	1.8	6.9	0.0	93.1
Net disability benefits	2.1	1.9	0.0	98.1
Education-related allowances	2.3	3.6	0.0	96.4

Longitudinal component. Item non-response. Gross amounts

SILC 2004. Distribution of item non-response. Gross amounts.

	% households having received an amount	% households with missing values (before imputation)	% households with partial information (before imputation)	% households with total information (before imputation)
Total household gross income	99.7	7.6	52.7	39.7
Gross income from rental of a property or land	5.9	1.3	5.3	93.4
Gross family/children-related allowances	5.3	2.5	14.4	83.2
Gross social exclusion not elsewhere classified	0.7	3.8	0.0	96.2
Gross housing allowances	0.7	0.0	0.0	100.0
Gross regular inter-household cash transfer received	3.0	3.5	0.0	96.5
Gross interest, div., profit from capital invest. in uninc. business	34.7	38.5	14.4	47.1
Gross income received by people aged under 16	4.0	0.0	0.0	100.0
Gross regular taxes on wealth	4.4	37.7	16.8	45.5
Gross regular inter-household cash transfer paid	5.7	6.9	0.0	93.1
		% persons with missing values (before imputation)	% persons with partial information (before imputation)	% persons with total information (before imputation)
Gross cash or near cash employee income	44.0	9.4	50.2	40.4
Gross non-cash employee income	0.7	12.5	0.0	87.5
Gross cash profits or losses from self-employment	7.5	13.6	57.2	29.2
Gross pension from individual private plans	0.7	3.8	0.0	96.2
Gross unemployment benefits	5.7	1.8	1.6	96.6
Gross old-age benefits	20.2	1.8	2.9	95.3
Gross survivors benefits	1.8	0.7	2.8	96.5
Gross sickness benefits	1.1	1.1	0.0	98.9
Gross disability benefits	2.3	2.2	0.0	97.8
Gross education-related allowances	1.3	6.7	0.0	93.3

SILC 2005. Distribution of item non-response. Gross amounts.

	% households having received an amount	% households with missing values (before imputation)	% households with partial information (before imputation)	% households with total information (before imputation)
Total household gross income	99.6	6.2	54.3	39.5
Gross income from rental of a property or land	6.0	6.2	28.1	65.7
Gross family/children-related allowances	3.1	1.4	3.3	95.2
Gross social exclusion not elsewhere classified	0.6	0.0	0.0	100.0
Gross housing allowances	0.7	4.0	0.0	96.0
Gross regular inter-household cash transfer received	2.2	10.5	0.0	89.5
Gross interest, div., profit from capital invest. in uninc. business	29.0	43.9	37.8	18.3
Gross income received by people aged under 16	3.8	0.4	0.0	99.6
Gross regular taxes on wealth	3.6	32.8	12.7	54.5
Gross regular inter-household cash transfer paid	4.8	6.1	0.0	93.9
		% persons with missing values (before imputation)	% persons with partial information (before imputation)	% persons with total information (before imputation)
Gross cash or near cash employee income	43.6	13.0	35.0	52.0
Gross non-cash employee income	0.5	29.4	0.0	70.6
Gross cash profits or losses from self-employment	8.1	26.7	48.7	24.6
Gross pension from individual private plans	0.4	8.2	0.0	91.8
Gross unemployment benefits	5.1	5.8	5.5	88.7
Gross old-age benefits	19.2	6.4	8.3	85.3
Gross survivors benefits	1.7	3.5	5.4	91.2
Gross sickness benefits	1.3	13.5	1.4	85.0
Gross disability benefits	2.2	2.9	4.7	92.4
Gross education-related allowances	1.7	5.2	0.0	94.8

SILC 2006. Distribution of item non-response. Gross amounts.

	% households having received an amount	% households with missing values (before imputation)	% households with partial information (before imputation)	% households with total information (before imputation)
Total household gross income	99.6	5.5	52.8	41.7
Gross income from rental of a property or land	5.4	10.7	27.8	61.4
Gross family/children-related allowances	3.3	4.9	3.6	91.6
Gross social exclusion not elsewhere classified	0.7	6.3	0.0	93.8
Gross housing allowances	0.8	9.0	0.0	91.0
Gross regular inter-household cash transfer received	2.4	10.0	0.0	90.0
Gross interest, div., profit from capital invest. in uninc. business	27.8	44.6	38.2	17.3
Gross income received by people aged under 16	3.9	2.2	0.0	97.8
Gross regular taxes on wealth	3.8	36.1	13.2	50.7
Gross regular inter-household cash transfer paid	5.5	5.4	0.0	94.6
		% persons with missing values (before imputation)	% persons with partial information (before imputation)	% persons with total information (before imputation)
Gross cash or near cash employee income	44.2	12.4	35.1	52.5
Gross non-cash employee income	0.7	25.2	0.0	74.8
Gross cash profits or losses from self-employment	8.0	20.2	50.9	29.0
Gross pension from individual private plans	0.6	11.0	4.7	84.3
Gross unemployment benefits	4.9	6.8	5.6	87.6
Gross old-age benefits	20.0	5.5	8.3	86.3
Gross survivors benefits	1.6	5.6	5.9	88.5
Gross sickness benefits	1.6	9.1	2.0	88.9
Gross disability benefits	1.9	3.4	4.1	92.5
Gross education-related allowances	1.3	5.8	0.0	94.2

SILC 2007. Distribution of item non-response. Gross amounts.

	% households having received an amount	% households with missing values (before imputation)	% households with partial information (before imputation)	% households with total information (before imputation)
Total household gross income	99.6	2.8	54.4	42.9
Gross income from rental of a property or land	6.5	4.0	25.3	70.8
Gross family/children-related allowances	3.8	4.4	2.2	93.4
Gross social exclusion not elsewhere classified	0.9	3.9	0.0	96.1
Gross housing allowances	1.3	8.8	0.0	91.2
Gross regular inter-household cash transfer received	3.2	5.1	0.0	94.9
Gross interest, div., profit from capital invest. in uninc. business	35.8	36.0	39.3	24.7
Gross income received by people aged under 16	3.2	1.1	0.0	98.9
Gross regular taxes on wealth	4.3	33.4	13.3	53.3
Gross regular inter-household cash transfer paid	6.3	3.4	0.0	96.6
		% persons with missing values (before imputation)	% persons with partial information (before imputation)	% persons with total information (before imputation)
Gross cash or near cash employee income	45.8	7.8	30.8	61.4
Gross non-cash employee income	1.0	13.0	0.0	87.0
Gross cash profits or losses from self-employment	7.8	17.3	50.1	32.6
Gross pension from individual private plans	0.7	8.1	3.7	88.1
Gross unemployment benefits	5.1	5.4	4.4	90.2
Gross old-age benefits	20.0	3.0	7.2	89.8
Gross survivors benefits	1.7	1.2	4.7	94.1
Gross sickness benefits	1.8	6.9	2.2	90.9
Gross disability benefits	2.1	1.9	2.9	95.2
Gross education-related allowances	2.3	3.6	0.0	96.4



## 2.4. Mode of data collection

Questionnaires are completed by CAPI (Compute Aided Personal Interviewing). This procedure was implemented in the 2005 operation (in 2004 questionnaires were completed by PAPI).

The main mode of data collection was personal interview with all household members who were aged 16 and above as at 31 December of the year before the year of interview.

If personal interview was impracticable because the subject was temporarily absent or was unable to respond, we would conduct a telephone interview or interview another household member and later corroborate the information with the subject.

The percentage of proxy interviews is very high in the Spanish SILC. It is related to the individual non-response.

One of the major concerns is the individual non-response after the bad results in 2004 survey (15.63 %). Since the 2005 survey an effort in fieldwork has been made to reduce this individual non-response. Once the individual non-response has been reduced, there is from 2005 a high rate of proxy interviews that we are trying to reduce.

Longitudinal component. Mode of data collection

SILC 2004. Distribution of household members aged 16 and over by RB245.

		Number	Percentage
Total	Total	9382	100.0
	RB250=11	7875	83.9
	RB250=21	28	0.3
	RB250=22	28	0.3
	RB250=23	197	2.1
	RB250=31	50	0.5
	RB250=32	600	6.4
	RB250=33	604	6.4
Sample persons	Total	9382	100.0
	RB250=11	7875	83.9
	RB250=21	28	0.3
	RB250=22	28	0.3
	RB250=23	197	2.1
	RB250=31	50	0.5
	RB250=32	600	6.4
	RB250=33	604	6.4

SILC 2004. Distribution of household members aged 16 and over by RB260.

		Number	Percentage
Total	Total	7858	100.0
	RB260=1	5050	64.3
	RB260=3	118	1.5
	RB260=4	132	1.7
	RB260=5	2558	32.6
Sample	Total	7858	100.0

persons	RB260=1	5050	64.3
	RB260=3	118	1.5
	RB260=4	132	1.7
	RB260=5	2558	32.6

SILC 2005. Distribution of household members aged 16 and over by RB245.

		Number	Percentage
Total	Total	16099	100.0
	RB250=11	15622	97.0
	RB250=21	16	0.1
	RB250=23	116	0.7
	RB250=31	79	0.5
	RB250=32	132	0.8
	RB250=33	134	0.8
Sample persons	Total	15941	100.0
	RB250=11	15481	97.1
	RB250=21	15	0.1
	RB250=23	110	0.7
	RB250=31	78	0.5
	RB250=32	129	0.8
	RB250=33	128	0.8
Co-residents	Total	158	100.0
	RB250=11	141	89.2
	RB250=21	1	0.6
	RB250=23	6	3.8
	RB250=31	1	0.6
	RB250=32	3	1.9
	RB250=33	6	3.8

SILC 2005. Distribution of household members aged 16 and over by RB260.

		Number	Percentage
Total	Total	15612	100.0
	RB260=2	8946	57.3
	RB260=3	366	2.3
	RB260=4	2	0.0
	RB260=5	6298	40.3
Sample persons	Total	15471	100.0
	RB260=2	8895	57.5
	RB260=3	359	2.3
	RB260=4	2	0.0
	RB260=5	6215	40.2
Co-residents	Total	141	100.0
	RB260=2	51	36.2
	RB260=3	7	5.0
	RB260=5	83	58.9

SILC 2006. Distribution of household members aged 16 and over by RB245.

		Number	Percentage
Total	Total	22120	100.0
	RB250=11	21556	97.5
	RB250=21	12	0.1
	RB250=23	183	0.8
	RB250=31	83	0.4
	RB250=32	64	0.3
	RB250=33	222	1.0
Sample persons	Total	21660	100.0
	RB250=11	21130	97.6
	RB250=21	11	0.1
	RB250=23	169	0.8
	RB250=31	76	0.4
	RB250=32	64	0.3
	RB250=33	210	1.0
Co-residents	Total	458	100.0
	RB250=11	424	92.6
	RB250=21	1	0.2
	RB250=23	14	3.1
	RB250=31	7	1.5
	RB250=33	12	2.6
Missing	Total	2	100.0
	RB250=11	2	100.0

SILC 2006. Distribution of household members aged 16 and over by RB260.

		Number	Percentage
Total	Total	21553	100.0
	RB260=2	11741	54.5
	RB260=3	850	3.9
	RB260=5	8962	41.6
Sample persons	Total	21127	100.0
	RB260=2	11597	54.9
	RB260=3	836	4.0
	RB260=5	8694	41.2
Co-residents	Total	424	100.0
	RB260=2	144	34.0
	RB260=3	14	3.3
	RB260=5	266	62.7
Missing	Total	2	100.0
	RB260=5	2	100.0

SILC 2007. Distribution of household members aged 16 and over by RB245.

		Number	Percentage
Total	Total	19960	100.0
	RB250=11	19832	99.4
	RB250=21	10	0.1
	RB250=23	50	0.3
	RB250=31	21	0.1
	RB250=32	15	0.1
	RB250=33	32	0.2
Sample persons	Total	19035	100.0
	RB250=11	18934	99.5
	RB250=21	7	0.0
	RB250=23	37	0.2
	RB250=31	19	0.1
	RB250=32	15	0.1
	RB250=33	23	0.1
Co-residents	Total	925	100.0
	RB250=11	898	97.1
	RB250=21	3	0.3
	RB250=23	13	1.4
	RB250=31	2	0.2
	RB250=33	9	1.0

SILC 2007. Distribution of household members aged 16 and over by RB260.

		Number	Percentage
Total	Total	19831	100.0
	RB260=2	10630	53.6
	RB260=3	873	4.4
	RB260=5	8328	42.0
Sample persons	Total	18933	100.0
	RB260=2	10367	54.8
	RB260=3	843	4.5
Co-residents	Total	7723	40.8
	RB260=2	898	100.0
	RB260=3	263	29.3
	RB260=5	30	3.3
		605	67.4

## 2.5. Imputation procedure

The imputation in the Spanish SILC uses a methodology similar to the one used by Eurostat for the ECHP. The reference of the procedure applied is described in the document SILC136.

The statistical imputation software used has been IVE-ware. This software is easy to use and has been used in ECHP with satisfactory results. The IVE-ware approach consists of a multivariate model involving a multiple regression sequence. For each variable the best regression method is chosen according to the nature of the variable being imputed. The continuous variable, that is the case in income variables, is imputed with a normal linear regression model.

Before imputation, in the checking phase, some points need to be solved. In case that the filter of an income component is "missing", it is checked if there are some other signs, from other variables, to correct this filter. The same procedure is used to determine the number of months that the unit has received an income component.

In the imputation phase the first step is to determine if a variable should be imputed or not determining the value of the filter for the income component. If the filter variable is set to "No" the rule is that no imputation needs to be done. If instead the answer to the filter variable is "missing", after the checking phase, then "No" is imputed to the filter. If the filter is "Yes" and there is not enough information then imputation is needed.

Once the filter is known the following step is the calculation of the amount of the income component. If there is enough information to calculate the target variable then it is calculated. The amounts of the previous wave are used when available. If the amount cannot be calculated then it is imputed with the restriction of an interval. This interval can be specified in the questionnaire or, if this doesn't exist, an interval is calculated using information of the distribution of the collected values. After a logarithmic transformation the imputation is carried out jointly with others components collected at the same level (household or individual). All records with missing values, for income components, are imputed.

The construction of within-household non-response inflation factor (HY025) is based in the imputation of a personal income to the persons without individual questionnaire. The imputed personal income is the mean of personal incomes of the group to which the person belongs. Groups are formed with available information (using R-file) for all persons (sex, age, activity, etc.). When the calculated within-household non-response inflation factor is very high, i. e., there is an important lack of information due to individual non-response, the variable HY025 is set to missing.

Cross-sectional component.

SILC 2007. Percentage of imputation per household income components (average of the ratio of imputation over all units)

	Percentage
Total disposable household income	10.15
T. d. h. income before s. tr. other than old_age and surv. ben.	10.51
T. d. h. income before s. tr. including old_age and surv. ben.	13.73
Net income from rental of a property or land	0.51
Family/children-related allowances	0.14
Social exclusion not elsewhere classified	0.03
Housing allowances	0.10
Regular inter-household cash transfer received	0.19
Net interest, div., profit from capital invest. in uninc. business	19.48
Net income received by people aged under 16	0.03

Regular taxes on wealth	1.50
Regular inter-household cash transfer paid	0.29
Repayments/receipts for tax adjustments	4.95

SILC 2007. Percentage of imputation per personal income components (average of the ratio of imputation over all units)

	Percentage
Net cash or near cash employee income	4.34
Net non-cash employee income	0.15
Net cash profits or losses from self-employment	3.26
Net pension from individual private plans	0.06
Net unemployment benefits	0.30
Net old-age benefits	0.81
Net survivors benefits	0.03
Net sickness benefits	0.12
Net disability benefits	0.08
Education-related allowances	0.09
Gross monthly earnings for employees	4.55

Longitudinal component.

SILC 2004. Percentage of imputation per household income components (average of the ratio of imputation over all units)

	Percentage
Total disposable household income	9.57
T. d. h. income before s. tr. other than old_age and surv. ben.	10.04
T. d. h. income before s. tr. including old_age and surv. ben.	13.83
Net income from rental of a property or land	0.08
Family/children-related allowances	0.57
Social exclusion not elsewhere classified	0.03
Housing allowances	0.00
Regular inter-household cash transfer received	0.10
Net interest, div., profit from capital invest. in uninc. business	15.55
Net income received by people aged under 16	0.00
Regular taxes on wealth	1.64
Regular inter-household cash transfer paid	0.39
Repayments/receipts for tax adjustments	8.66

SILC 2004. Percentage of imputation per personal income components (average of the ratio of imputation over all units)

	Percentage
Net cash or near cash employee income	4.14
Net non-cash employee income	0.09
Net cash profits or losses from self-employment	3.09
Net pension from individual private plans	0.03
Net unemployment benefits	0.10
Net old-age benefits	0.38
Net survivors benefits	0.01
Net sickness benefits	0.01
Net disability benefits	0.05
Education-related allowances	0.09

SILC 2005. Percentage of imputation per household income components (average of the ratio of imputation over all units)

	Percentage
Total disposable household income	13.97
T. d. h. income before s. tr. other than old_age and surv. ben.	14.39
T. d. h. income before s. tr. including old_age and surv. ben.	17.53
Net income from rental of a property or land	0.64
Family/children-related allowances	0.06
Social exclusion not elsewhere classified	0.00
Housing allowances	0.03
Regular inter-household cash transfer received	0.24
Net interest, div., profit from capital invest. in uninc. business	17.39
Net income received by people aged under 16	0.01
Regular taxes on wealth	1.27
Regular inter-household cash transfer paid	0.30
Repayments/receipts for tax adjustments	6.12

SILC 2005. Percentage of imputation per personal income components (average of the ratio of imputation over all units)

	Percentage
Net cash or near cash employee income	5.69
Net non-cash employee income	0.16
Net cash profits or losses from self-employment	4.45
Net pension from individual private plans	0.03
Net unemployment benefits	0.30
Net old-age benefits	1.24
Net survivors benefits	0.06
Net sickness benefits	0.18
Net disability benefits	0.06
Education-related allowances	0.09

SILC 2006. Percentage of imputation per household income components (average of the ratio of imputation over all units)

	Percentage
Total disposable household income	12.53
T. d. h. income before s. tr. other than old_age and surv. ben.	12.98
T. d. h. income before s. tr. including old_age and surv. ben.	15.96
Net income from rental of a property or land	0.76
Family/children-related allowances	0.19
Social exclusion not elsewhere classified	0.04
Housing allowances	0.07
Regular inter-household cash transfer received	0.23
Net interest, div., profit from capital invest. in uninc. business	17.03
Net income received by people aged under 16	0.09
Regular taxes on wealth	1.39
Regular inter-household cash transfer paid	0.30
Repayments/receipts for tax adjustments	6.45

SILC 2006. Percentage of imputation per personal income components (average of the ratio of imputation over all units)

	Percentage
Net cash or near cash employee income	5.47
Net non-cash employee income	0.17
Net cash profits or losses from self-employment	3.68
Net pension from individual private plans	0.06
Net unemployment benefits	0.33
Net old-age benefits	1.13
Net survivors benefits	0.09
Net sickness benefits	0.15
Net disability benefits	0.06
Education-related allowances	0.07

SILC 2007. Percentage of imputation per household income components (average of the ratio of imputation over all units)

	Percentage
Total disposable household income	8.87
T. d. h. income before s. tr. other than old_age and surv. ben.	9.17
T. d. h. income before s. tr. including old_age and surv. ben.	12.41
Net income from rental of a property or land	0.45
Family/children-related allowances	0.18
Social exclusion not elsewhere classified	0.04
Housing allowances	0.12
Regular inter-household cash transfer received	0.16
Net interest, div., profit from capital invest. in uninc. business	19.02
Net income received by people aged under 16	0.04
Regular taxes on wealth	1.49
Regular inter-household cash transfer paid	0.21
Repayments/receipts for tax adjustments	4.76

SILC 2007. Percentage of imputation per personal income components (average of the ratio of imputation over all units)

	Percentage
Net cash or near cash employee income	3.59
Net non-cash employee income	0.13
Net cash profits or losses from self-employment	3.34
Net pension from individual private plans	0.06
Net unemployment benefits	0.28
Net old-age benefits	0.63
Net survivors benefits	0.02
Net sickness benefits	0.13
Net disability benefits	0.04
Education-related allowances	0.08

## 2.6. Imputed rent

The variable **imputed rent** (HY030) is calculated using the stratified-method rent (HY030e) and the subjective rent (HH061). These two concepts of renting are added up proportionally to build the imputed rent as follows:

$$\text{HY030} = 0,70 * \text{HY030e} + 0,30 * \text{HH061}$$

The variable subjective rent (HH061) is obtained from the questionnaire, however the 70% of the imputed rent is calculated by means of an stratified method that will be explained later.

### The selected variables

In order to calculate the imputed rent, by means of the stratified model, the following variables are used:

- Type of dwelling
- Degree of urbanization
- Number of rooms in the dwelling
- Time period in the dwelling (year of purchase or contract)

Indeed, to avoid the sample size for some variables, such as number of rooms, type of dwelling and year of contract, from being too small, some groups were made.

Groups for:

- **Type of dwelling:** type 1 (house), type 2 (flat in a less-than-ten dwelling building) and type 3 (flat in a more-than-nine dwelling building).
- **Degree of urbanization:** densely-populated, half densely-populated and sparsely-populated areas.
- **Number of rooms in the dwelling:** less than 4, 4, 5, and more than 5.
- **Time period in the dwelling:** before 1988, between 1988 and 2000 and beyond 2000.

### The strata

Our initial data set contains those households having a market-price rent, and we split them into groups according to some specification on some variable above mentioned. Then, each of these groups is again split into other groups according to any other variable not used before in previous division, in an nested way. The aim is to construct homogeneous strata with a minimum sample size.

Once the stratification is done, each non market-price-rented household is assigned to one strata, and therefore the imputed rent value for this household, will be the strata mean rent.

Only when the household is a lower market price rent, the final imputed rent will be the strata mean rent minus the current rent.

<p><b><u>Strata 1</u></b></p> <ul style="list-style-type: none"> <li>▪ Densely-populated area</li> <li>▪ Before 1988</li> <li>▪ Type of dwelling: I and II</li> </ul>	<p><b><u>Strata 2</u></b></p> <ul style="list-style-type: none"> <li>▪ Densely-populated area</li> <li>▪ Before 1988</li> <li>▪ Type of dwelling: III</li> <li>▪ Rooms: <math>\leq 4</math></li> </ul>	<p><b><u>Strata 3</u></b></p> <ul style="list-style-type: none"> <li>▪ Densely-populated area</li> <li>▪ Before 1988</li> <li>▪ Type of dwelling: III</li> <li>▪ Rooms: <math>\geq 5</math></li> </ul>
<p><b><u>Strata 4</u></b></p> <ul style="list-style-type: none"> <li>▪ Densely-populated area</li> <li>▪ Within (1988,2000)</li> <li>▪ Type of dwelling: I and II</li> <li>▪ Rooms: <math>\leq 4</math></li> </ul>	<p><b><u>Strata 5</u></b></p> <ul style="list-style-type: none"> <li>▪ Densely-populated area</li> <li>▪ Within (1988,2000)</li> <li>▪ Type of dwelling: I and II</li> <li>▪ Rooms: <math>\geq 5</math></li> </ul>	<p><b><u>Strata 6</u></b></p> <ul style="list-style-type: none"> <li>▪ Densely-populated area</li> <li>▪ Within (1988,2000)</li> <li>▪ Type of dwelling: III</li> </ul>
<p><b><u>Strata 7</u></b></p> <ul style="list-style-type: none"> <li>▪ Densely-populated area</li> <li>▪ Beyond 2000</li> <li>▪ Type of dwelling: I</li> </ul>	<p><b><u>Strata 8</u></b></p> <ul style="list-style-type: none"> <li>▪ Densely-populated area</li> <li>▪ Beyond 2000</li> <li>▪ Type of dwelling: II</li> </ul>	<p><b><u>Strata 9</u></b></p> <ul style="list-style-type: none"> <li>▪ Densely-populated area</li> <li>▪ Beyond 2000</li> <li>▪ Type of dwelling: III</li> <li>▪ Rooms: <math>&lt; 4</math></li> </ul>
<p><b><u>Strata 10</u></b></p> <ul style="list-style-type: none"> <li>▪ Densely-populated area</li> <li>▪ Beyond 2000</li> <li>▪ Type of dwelling: III</li> <li>▪ Rooms: 4</li> </ul>	<p><b><u>Strata 11</u></b></p> <ul style="list-style-type: none"> <li>▪ Densely-populated area</li> <li>▪ Beyond 2000</li> <li>▪ Type of dwelling: III</li> <li>▪ Rooms: <math>\geq 5</math></li> </ul>	<p><b><u>Strata 12</u></b></p> <ul style="list-style-type: none"> <li>▪ Half densely-populated area</li> <li>▪ Type of dwelling: I</li> </ul>
<p><b><u>Strata 13</u></b></p> <ul style="list-style-type: none"> <li>▪ Half densely-populated area</li> <li>▪ Type of dwelling: II</li> <li>▪ Rooms: <math>\leq 4</math></li> </ul>	<p><b><u>Strata 14</u></b></p> <ul style="list-style-type: none"> <li>▪ Half densely-populated area</li> <li>▪ Type of dwelling: II</li> <li>▪ Rooms: <math>\geq 5</math></li> </ul>	<p><b><u>Strata 15</u></b></p> <ul style="list-style-type: none"> <li>▪ Half densely-populated area</li> <li>▪ Type of dwelling: III</li> </ul>
<p><b><u>Strata 16</u></b></p> <ul style="list-style-type: none"> <li>▪ Sparcely-populated area</li> <li>▪ Type of dwelling: I</li> <li>▪ Rooms: <math>\leq 4</math></li> </ul>	<p><b><u>Strata 17</u></b></p> <ul style="list-style-type: none"> <li>▪ Sparcely-populated area</li> <li>▪ Type of dwelling: I</li> <li>▪ Rooms: <math>\geq 5</math></li> </ul>	<p><b><u>Strata 18</u></b></p> <ul style="list-style-type: none"> <li>▪ Sparcely-populated area</li> <li>▪ Type of dwelling: II</li> <li>▪ Before 2001</li> </ul>
<p><b><u>Strata 19</u></b></p> <ul style="list-style-type: none"> <li>▪ Sparcely-populated area</li> <li>▪ Type of dwelling: II</li> <li>▪ Beyond 2000</li> </ul>	<p><b><u>Strata 20</u></b></p> <ul style="list-style-type: none"> <li>▪ Sparcely-populated area</li> <li>▪ Type of dwelling: III</li> </ul>	

## 2.7. Company cars

The method used to impute the value to the use of a company car is based in the Spanish Fiscal procedure to tax this non-cash income. We have two cases:

- The car is given to the employee. A market value is assigned depending of the value of the car supposing it is new and the age of the car, depreciating 20 % of this value for each year. The information about the value (supposing the car is new) and the age of the car is asked to the respondent. If the car is 5 or more years old no amount is imputed.

- Only the use of the car is provided to the employee. The imputed income is 20% of the market value of the car supposing it is new. The value is adjusted proportionally with the percentage of private use. The information about the value (supposing the car is new), the age of the car and percentage of use is asked to the respondent. If the car is 5 or more years old no amount is imputed.

### **3. COMPARABILITY**

#### **3.1. Basic concepts and definitions**

- Reference population. (No differences between national and EU-SILC concept.)

The target population was members of private households residing at main family addresses, and the households themselves.

Although all persons formed part of the target population, not all were surveyed exhaustively: only those who were aged 16 or over as at 31 December of the year before the year of interview.

- Private household definition. (No differences between national and EU-SILC concept.)

An individual or a group of people occupying in common a main family address or a part of it, and consuming and/or sharing food or other goods paid for out of a common budget.

- Household membership.

We have tried to implement in the field the definition of 'household member' given in the Commission Regulation. But, owing to the large number of possible special cases, and so as to reduce the number of related items on the questionnaire, there may be differences in some marginal cases.

To identify those differences, we provide a table below in which the left column itemises groups of people deemed household members under the definition given in the Regulation. On the right of the table we indicate whether such persons are household members under the definition used for the Spanish questionnaire.

Next we provide a reciprocal table in which the left column itemises groups of people deemed household members under the definition used for the Spanish questionnaire, while the right column indicates whether they are household members under the definition given in the Regulation.



**STANDARD DEFINITION OF HOUSEHOLD MEMBER  
ACCORDING TO EU-SILC (under Regulation)**

**DIFFERENCES FROM NATIONAL DEFINITION**

<p>Present:</p> <ul style="list-style-type: none"> <li>- Usually resident at the address</li> <li>- Related to other household members</li> <li>- Share expenses</li> </ul>	<p>(No differences between national and EU-SILC concept.)</p>
<p>Present:</p> <ul style="list-style-type: none"> <li>- Usually resident at the address</li> <li>- Not related to household members</li> <li>- Share expenses</li> </ul>	<p>(No differences between national and EU-SILC concept.)</p>
<p>Present:</p> <ul style="list-style-type: none"> <li>- Resident boarders, lodgers, tenants</li> <li>- Have no private address elsewhere</li> <li>- Share expenses</li> </ul>	<p>(No differences between national and EU-SILC concept.)</p>
<p>Present:</p> <ul style="list-style-type: none"> <li>- Resident boarders, lodgers, tenants</li> <li>- Actual or intended length of stay is 6 months or more</li> <li>- Share expenses</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Have other address they treat as their usual residence.</i> <b><i>Not a member of the interviewed household.</i></b></li> <li>• Otherwise: No differences between national and EU-SILC concept.</li> </ul>
<p>Present:</p> <ul style="list-style-type: none"> <li>- Visitors</li> <li>- Have no private address elsewhere</li> <li>- Share expenses</li> </ul>	<p>No differences between national and EU-SILC concept.</p>

<p>Present:</p> <ul style="list-style-type: none"> <li>- Visitors</li> <li>- Actual or intended length of stay is 6 months or more</li> <li>- Share expenses</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Have other address they treat as their usual residence.</i> <b>Not a member of the interviewed household.</b></li> <li>• Otherwise: No differences between national and EU-SILC concept.</li> </ul>
<p>Present:</p> <ul style="list-style-type: none"> <li>- Live-in domestic employees, au pairs</li> <li>- Have no private address elsewhere</li> <li>- Share expenses</li> </ul>	<p>No differences between national and EU-SILC concept.</p>
<p>Present:</p> <ul style="list-style-type: none"> <li>- Live-in domestic employees, au pairs</li> <li>- Actual or intended length of stay is 6 months or more</li> <li>- Share expenses</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Have other address they treat as their usual residence.</i> <b>Not a household member.</b></li> <li>• Otherwise: No differences between national and EU-SILC concept.</li> </ul>
<p>Absent:</p> <ul style="list-style-type: none"> <li>- Temporarily absent owing to holiday leave, work reasons, studies and similar</li> <li>- Have no private address elsewhere</li> <li>- Actual or intended length of stay is less than 6 months</li> <li>- Share expenses</li> </ul>	<p>No differences between national and EU-SILC concept.</p>
<p>Absent:</p> <ul style="list-style-type: none"> <li>- Temporarily absent owing to holiday leave, work reasons, studies and similar</li> <li>- Have no private address elsewhere</li> <li>- Actual or intended length of stay is more than 6 months</li> <li>- Very close ties to household</li> <li>- Share expenses</li> </ul>	<p>No differences between national and EU-SILC concept.</p>

<p>Absent:</p> <ul style="list-style-type: none"> <li>- Children of the household</li> <li>- Receiving education away from home</li> <li>- Have no private address elsewhere</li> <li>- Treat this address as their main residence</li> <li>- Share expenses</li> </ul>	<p>No differences between national and EU-SILC concept.</p>
<p>Absent:</p> <ul style="list-style-type: none"> <li>- Persons with ties to the household away for extended periods for work reasons</li> <li>- Have no private address elsewhere</li> <li>- Must be a household member's partner or child</li> <li>- Treat this address as their main residence</li> <li>- Share expenses</li> </ul>	<p>No differences between national and EU-SILC concept.</p>
<p>Absent:</p> <ul style="list-style-type: none"> <li>- Temporarily absent persons with ties to the household</li> <li>- In hospital, clinic or other institution</li> <li>- Have financial ties to the household</li> <li>- Actual or intended length of absence must be less than 6</li> <li>- Share expenses (financial ties)</li> </ul>	<p>No differences between national and EU-SILC concept.</p>

**Conclusion:**

If a person is a household member according to the definition in the Regulation, he/she is also a household member under the national definition, except in the following group:

- Resident boarders, lodgers, tenants, visitors or domestic servants present at the place of interview
- Actual or intended length of stay is 6 months or more
- Have other address they treat as their usual residence and do not have close ties to household
- Share expenses

Under the Regulation, persons meeting the above conditions are treated as members of the household in which they are present. But they are not considered household members in the Spanish survey because priority is given to the fact that they have another address they regard as their usual residence. Due to the lack of sources is difficult to assess the impact of this difference, but we think it is marginal.

**NATIONAL DEFINITION OF HOUSEHOLD MEMBER  
(Cases contemplated in the Spanish version  
of the questionnaire)**

**DIFFERENCES FROM STANDARD DEFINITION OF HOUSEHOLD  
MEMBERS ACCORDING TO EU-SILC (under Regulation)**

<p>Present:</p> <ul style="list-style-type: none"> <li>- Has no other address he/she treats as usual residence</li> <li>- Shares income or expenditures with the household</li> </ul>	<p>No differences between national and EU-SILC concept.</p>
<p>Absent:</p> <ul style="list-style-type: none"> <li>- In hospital, clinic or other institution, such as nursing home, prison, etc.</li> <li>- Total length of stay to be less than 6 months</li> <li>- Considers this his/her usual residence</li> <li>- Shares income or expenditures with the household</li> </ul>	<p>No differences between national and EU-SILC concept.</p>
<p>Absent:</p> <ul style="list-style-type: none"> <li>- Work reasons</li> <li>- Considers this his/her usual residence</li> <li>- Shares income or expenditures with the household</li> </ul>	<p>No differences between national and EU-SILC concept.</p>
<p>Absent:</p> <ul style="list-style-type: none"> <li>- Study reasons</li> <li>- Considers this his/her usual residence</li> <li>- Shares income or expenditures with the household</li> </ul>	<p>No differences between national and EU-SILC concept.</p>

Absent:

- Travel
- Considers this his/her usual residence
- Shares income or expenditures with the household

No differences between national and EU-SILC concept.

Conclusion:

If a person is a household member according to the national definition, he/she is also a household member under the Regulation definition.

- Income reference period.

The income reference period is the previous calendar year.

- Period for taxes on income and social insurance contributions.

We considered taxes received/paid during the income reference period. In the case of tax adjustments, these taxes usually refer to income received in previous years of the income reference period. For example in 2007 survey, only refunds/payments for tax adjustments (personal income tax – Spanish IRPF) paid/received in 2006 were provided. These taxes normally refer to income received in 2005, but there may be instances of income received in previous years.

- Reference period for taxes on wealth.

We considered the tax received/paid during the income reference period.

- Lag between income reference period and current variables.

From 31 December of the year prior to the survey to the time of data collection (March-July). The lag thus ranged from 2 to 6 months.

- Total duration of the data collection of the sample.

March to July of the survey year.

- Basic information on activity status during the income reference period.

We used the definition given in EU-SILC 065/04.

- Definition of “number of rooms” (HH030)

In 2004 and 2005 survey we tried to follow the definition given in Doc 65. From the 2006 survey, kitchens of at least 4 square meters are included.

### 3.2. Components of income

3.2.1. Differences between the national definitions and standard EU-SILC definitions, and an assessment, if available, of the consequences of the differences mentioned, for the following target variables:

- Total household gross income.

Provided for this survey.

- Total disposable household income.

(No differences between national and EU-SILC concept.)

Negative values are permitted.

- Total disposable household income, before social transfers other than old-age and survivors' benefits.

(No differences between national and EU-SILC concept.)

Negative values are permitted.

- Total disposable household income, before social transfers.

(No differences between national and EU-SILC concept.)

Negative values are permitted.

- Imputed rent.

Provided since the 2007 survey.

- Income from rental of property or land. (No differences between national and EU-SILC concept.)

(No differences between national and EU-SILC concept.)

- Family/children-related allowances.

(No differences between national and EU-SILC concept.)

- Social exclusion payments not elsewhere classified.

(No differences between national and EU-SILC concept.)

- Housing allowances.

(No differences between national and EU-SILC concept.)

- Regular inter-household cash transfers received.

(No differences between national and EU-SILC concept.)

- Interest, dividends, profit from capital investments in unincorporated businesses.

(No differences between national and EU-SILC concept.)

- Interest paid on mortgages.

Provided since the 2007 survey.

- Income received by people aged under 16.

(No differences between national and EU-SILC concept.)

- Regular taxes on wealth.

(No differences between national and EU-SILC concept.)

- Regular inter-household transfers paid.

(No differences between national and EU-SILC concept.)

- Tax on income and social insurance contributions.

Provided for this survey.

- Refunds/receipts for tax adjustments (personal income tax – IRPF).

(No differences between national and EU-SILC concept.)

- Cash or near-cash employee income.

(No differences between national and EU-SILC concept.)

- Non-cash employee income.

(No differences between national and EU-SILC concept.)

- Employers' social insurance contributions.

Provided since the 2007 survey.

Only the compulsory social contributions are included. The voluntary social contributions are excluded. According to the Labour Cost Survey (2007) the employers contributions to private plans are a 3% of the compulsory contributions.

- Cash profits or losses from self-employment (including royalties).

(No differences between national and EU-SILC concept.)

- Value of goods produced for own consumption.

Provided since the 2007 survey.

- Unemployment benefits.

(No differences between national and EU-SILC concept.)

- Old-age benefits.

(No differences between national and EU-SILC concept.)

- Survivors' benefits.

(No differences between national and EU-SILC concept.)

- Sickness benefits.

(No differences between national and EU-SILC concept.)

- Disability benefits.

(No differences between national and EU-SILC concept.)

- Education-related allowances.

(No differences between national and EU-SILC concept.)

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

We used personal interview as the method to collect income variables.

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

We gave respondents the option of reporting income gross or net (of tax on income at source and, if applicable, of social contributions) at component level. The interviewee normally states income net at source although in some cases gives too gross. The form in which the net amounts are recorded in database are net of tax on income at source and, if applicable, of social contributions.

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

Net amounts. Target income variables were reported net of tax on income at source and, where applicable, net of social contributions.

Gross amounts. Target gross income variables have also been obtained, reported directly by the respondent or using a net-to-gross conversion model.

This model is based on social security contributions and tax retentions. There are four possible conversion types to be applied to each of the income components:

Type I includes components having social security contributions and tax withholding at source, type II includes components having tax withholding at source, type III includes a flat rate tax retention, and type IV makes gross equal to net.

Social security contributions are calculated from gross income, employment, activity and education level. In turn, the tax withholding at source is obtained applying the taxation rules at source.

## 3.3. Tracing rules

Standard EU-SILC tracing rules are applied.

## 4. COHERENCE

### 4.1 Comparison of income target variables and number of persons who receive income from each 'income component', with external sources

Comparison with external sources is difficult because the definitions used do not match. The difficulty stems from the definition of the income component itself, which affects comparison of the number of people receiving a given income component, and affects comparison of the amount.

A very large proportion of social transfers, for instance, depends on Autonomous Communities (self-ruling region), and so it is very hard to bring all the available information together.

Nevertheless, we provide a range of tables to offer a guide to the structure of income distribution using other sources and some information about the activity status.

The available results from external sources come from:

- EU-SILC 2006 (previous year SILC)
- Labour Force Survey (LFS)
- INE National Accounts
- The *Boletín de Estadísticas Laborales* (labour statistics journal) of the Ministry of Labour and Social Affairs (social benefits)
- Fiscal sources

Starting with the current Survey on Income and Living Conditions (SILC) results, the following table itemises number of recipients, average income, average monthly income (taking account of 14 annual pay packets) and total income by component. Figures are given net (net of income tax at source and, where applicable, net of social contributions) and gross.

To make it easier to compare social transfers, we have removed the constraint that all survivors' and disability benefits for persons aged 65 and above are treated as old-age benefits.

SILC 2007. Source: Spanish Living Conditions Survey (SILC 2007). Adult recipients by income type (net figures)

	Recipients (thousands)	Average income 2006 (euros)	Average monthly income 2006 (euros)	Total income 2006 (millions of euros)
Cash employee income	18.524	14.135	1.010	261.829
Non-cash employee income	2.812	1.546	110	4.347
Cash profits or losses from self-employment	2.705	10.946	782	29.603
Unemployment benefits	1.986	3.582	256	7.112
Old-age benefits	5.617	10.545	753	59.232
Survivors benefits	1.611	7.028	502	11.322
Disability benefits	890	7.461	533	6.643

SILC 2007. Source: Spanish Living Conditions Survey (SILC 2007). Adult recipients by income type (gross figures)

	Recipients (thousands)	Average income 2006 (euros)	Average monthly income 2006 (euros)	Total income 2006 (millions of euros)
Cash employee income	18.524	17.311	1.236	320.662
Non-cash employee income	2.812	1.546	110	4.347
Cash profits or losses from self-employment	2.705	14.120	1.009	38.188
Unemployment benefits	1.986	3.668	262	7.283
Old-age benefits	5.617	11.216	801	63.002
Survivors benefits	1.611	7.166	512	11.544
Disability benefits	890	7.560	540	6.731

SILC 2007. Source: Spanish Living Conditions Survey (SILC 2007). Recipient households by income type (net figures)

	Recipient households (thousands)	Average income 2006 (euros)	Total income 2006 (millions of euros)
Income from rental of a property or land	937	6.222	5.832
Interest, div., profit from capital invest.	4.969	788	3.914

SILC 2007. Source: Spanish Living Conditions Survey (SILC 2007). Recipient households by income type (gross figures)

	Recipient households (thousands)	Average income 2006 (euros)	Total income 2006 (millions of euros)
Income from rental of a property or land	937	7.037	6.595
Interest, div., profit from capital invest.	4.969	909	4.515

The results for the activity are:

Source: Spanish Living Conditions Survey (SILC 2007). Adults by activity status (thousands)

	Persons (thousands)	Adults (percentages)
Total	37.428,8	100.0
Employment	18.772,5	50.2
Unemployment	1.754,7	4.7
Inactive population	16.839,8	45.0
Missing	61,9	0.2

## SILC 2006

The results for the previous year are:

SILC 2006. Source: Spanish Living Conditions Survey (SILC 2006). Adult recipients by income type (net figures)

	Recipients (thousands)	Average income 2005 (euros)	Average monthly income 2005 (euros)	Total income 2005 (millions of euros)
Cash employee income	17.668	13.698	978	242.012
Non-cash employee income	309	3.481	249	1.074
Cash profits or losses from self-employment	2.755	11.329	809	31.206
Unemployment benefits	1.819	3.541	253	6.442
Old-age benefits	5.525	9.936	710	54.900
Survivors benefits	1.626	6.454	461	10.496
Disability benefits	773	7.327	523	5.667

SILC 2006. Source: Spanish Living Conditions Survey (SILC 2006). Adult recipients by income type (gross figures)

	Recipients (thousands)	Average income 2005 (euros)	Average monthly income 2005 (euros)	Total income 2005 (millions of euros)
Cash employee income	17.668	16.659	1.190	294.321
Non-cash employee income	309	3.481	249	1.074
Cash profits or losses from self-employment	2.755	14.159	1.011	39.000
Unemployment benefits	1.819	3.610	258	6.568
Old-age benefits	5.525	10.238	731	56.567
Survivors benefits	1.626	6.540	467	10.637
Disability benefits	773	7.399	528	5.722

SILC 2006. Source: Spanish Living Conditions Survey (SILC 2006). Recipient households by income type (net figures)

	Recipient households (thousands)	Average income 2005 (euros)	Total income 2005 (millions of euros)
Income from rental of a property or land	782	5.140	4.020
Interest, div., profit from capital invest.	3.983	655	2.608

SILC 2006. Source: Spanish Living Conditions Survey (SILC 2006). Recipient households by income type (gross figures)

	Recipient households (thousands)	Average income 2005 (euros)	Total income 2005 (millions of euros)
Income from rental of a property or land	782	5.663	4.429
Interest, div., profit from capital invest.	3.983	751	2.992

In general we observe an increase in the average values. . It must be taken into account that "non-cash employee income" includes only the company car in SILC 2006.

## LFS

The number of persons by activity status according to the LFS (first quarter of 2007) is:

	Persons (thousands)	Adults (percentages)
Total	37.428,8	100.0
Employment	20.069,2	53.6
Unemployment	1.856,1	5.0
Inactive population	15.503,5	41.4

In the Spanish SILC there is some underreporting of the number of persons in employment.

## INE National Accounts

To compare with the results for other components of income we can use the interim National Accounts 2006. The following table presents data on "Accounts for the total economy and institutional sectors" ("Table of current accounts and accumulated accounts") of the household sector (millions of euros).

D.11.	Wages and salaries	359.813
B.3b	Gross mixed income	168.332
D.621	Social security benefits in cash	98.073
D.41	Interest	23.865
D.42	Income distributed by corporations	19.813
D.45	Income from land	856

To compare National Accounts and SILC data, account must be taken of the fact that the definition of income components and amount values (net/gross) are not always the same.

Concerning the employee income the amount for SILC is:  $320.662 + 4.347 = 325.009$  (survey 2007). For NA the employee income is 359.813 (year 2006).

'Net cash profits or losses from self-employment', 'income from rental of a property or land' and 'net interest, dividends, profit from capital investment in unincorporated business' are very poorly picked up by interview, so comparison is not possible. 'Income from rental of a property or land' under SILC is treated as mixed income in NA.

The differences between National Accounts and SILC are less with regard to figures on social benefits.

## Labour statistics journal (social benefits)

For social transfers we have the following data from the *Boletín de Estadísticas Laborales* (labour statistics journal) of the Ministry of Labour and Social Affairs.

## Social Security pension contributions 2006

### Pensions by scheme, class, years, number and average figure

Units: Number: thousands of pensions. Average figure: euros per month

	2006	
	Number	Average figure
<b>TOTAL</b>		
Total	8.165,34	641,86
Permanent disability	859,78	731,55
Retirement	4.809,3	722,71
Widowhood	2.196,93	476,7
Orphanhood	260,2	285,87

## Benefits not tied to contributions 2006

### Beneficiaries of benefits not tied to contributions by mode, class and year

Units: Number of beneficiaries (annual average)

	2006
<b>SOCIAL SECURITY PENSIONS NOT TIED TO CONTRIBUTIONS (1)</b>	481.764
Disability	204.844
Retirement	276.920

Comparing the number of benefits payees by type, we find the largest differences relate to survivors' benefits, 1.611 as against 2.196,93+260,2 (= 2.457,13). The largest differences in average amount are found in disability pensions (but it should be borne in mind that the average amount of pensions not tied to contributions is unknown).

The available statistics on unemployment refer only to the average annual number of beneficiaries of unemployment benefits and subsidies (1.330.432 in 2006). Other benefits and the turnover of unemployed workers in the year are not reflected, therefore.

### Fiscal sources

In relation to Fiscal sources the Tax Agency produces yearly the publication *Mercado de Trabajo y Pensiones en Las Fuentes Tributarias 2006* (Labour market and Pensions in Tax Sources). The reference period is the year 2006 and the amounts in the fiscal sources are gross.

### Number of persons with employee income and amount annual average

	Employees	Income (annual average) euros
Total	19.070.349	16.849

There are not important differences between the two sources (SILC and Fiscal sources).

### Number of persons with pensions income and amount annual average

	Pensioners	Pension (annual average) euros
Total	8.263.076	10.215

There are not important differences between the two sources (SILC and Fiscal sources) if we consider in EU-SILC together old-age, survivors and disability benefits.

### Number of persons with unemployment benefits and amount annual average

	Unemployed	Benefits (annual average) euros
Total	3.352.806	3.003

The difference between the two sources (SILC and Fiscal sources) can be explained if EU-SILC, perhaps, is not able of collecting cases of very short periods of unemployment.