INSTITUTO NACIONAL DE ESTADISTICA

Intermediate Quality Report

Survey on Income and Living Conditions Spain (Spanish ECV 2010)

Madrid, December 2011

CONTENTS

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+1, Member States produce an intermediate quality report on the cross-sectional component of the statistical operation. Article 16 further provides that by the end of the year N+2, Member States produce a final quality report covering both cross-sectional and longitudinal components.

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 sets out the EU common basic indicators drawn from EU-SILC survey 2010 (the Spanish version is called *Encuesta de Condiciones de Vida*), and provides information on accuracy, comparability and coherence with external sources.

The gross and net figures are provided for the 2010 Spanish microdata.

1. EUROPEAN UNION COMMON CROSS-SECTIONAL INDICATORS

1.1. European Union common cross-sectional indicators based on the cross-sectional component of EU-SILC

Common indicators

At-risk-of-poverty rate (after social transfer) by age and gender

Total	0 le age	20.7	9.455.666
	0 le age le 15	25.3	1.840.820
	16 le age le 24	25.3	1.111.197
	25 le age le 49	18.6	3.409.360
	50 le age le 64	18.1	1.448.091
	65 le age	21.7	1.646.198
	16 le age	19.9	7.614.846
	16 le age le 64	19.4	5.968.648
	0 le age le 64	20.5	7.809.468
Males	0 le age	20.1	4.525.549
	0 le age le 15	24.2	907.236
	16 le age le 24	24.5	549.390
	25 le age le 49	18.2	1.705.557
	50 le age le 64	18.4	718.856
	65 le age	19.9	644.511
	16 le age	19.3	3.618.313
	16 le age le 64	19.2	2.973.803
	0 le age le 64	20.1	3.881.038
Females	0 le age	21.3	4.930.117
	0 le age le 15	26.4	933.585
	16 le age le 24	26.2	561.806
	25 le age le 49	18.9	1.703.803
	50 le age le 64	17.9	729.235
	65 le age	23.1	1.001.687
	16 le age	20.4	3.996.532
	16 le age le 64	19.7	2.994.845
	0 le age le 64	20.9	3.928.430

At-risk-of-poverty rate by household type

	Total	Males	Females
One person household, under 65 years	22.2	23.8	20.0
One person household, 65 years and over	29.9	17.7	33.5
2 adults, no dependent children, both adults under 65 years	13.6	13.4	13.8
2 adults, no dep. children, at least 1 adult 65 years or more	22.2	22.5	21.9
Other households without dependent children	14.7	14.8	14.6
Single parent household, one or more dependent children	45.5	43.0	46.9
2 adults, one dependent child	18.2	18.0	18.3
2 adults, two dependent children	23.3	22.8	23.9
2 adults, three or more dependent children	44.2	40.8	48.0
Other households with dependent children	22.3	22.4	22.2
One person household, male	22.3	22.3	".."
One person household, female	28.2	".."	28.2
One person household, total	25.7	22.3	28.2
Households without dependent children	17.6	16.9	18.2
Household with dependent children	23.8	23.1	24.4

At-risk-of-poverty rate by accommodation tenure status

	Total	Males	Females
Owner or rent free	19.1	18.5	19.7
Tenant	33.3	32.3	34.3

At-risk-of-poverty threshold

	Threshold
For a one person household (euros)	7818.2
For a 2 adults and 2 children household (euros)	16418.2

Inequality of income distribution S80/S20 income quintile share ratio

	Ratio
s80s20	6.9

Relative median at-risk-of-poverty gap by age and gender

Total	Total	30.6
	0 le age le 15	35.5
	16 le age le 64	34.9
	65 le age	16.6
	16 le age	29.4
Males	Total	32.4
	0 le age le 15	35.4
	16 le age le 64	36.9
	65 le age	16.6
	16 le age	31.6
Females	Total	29.0
	0 le age le 15	35.5
	16 le age le 64	33.3
	65 le age	16.6
	16 le age	28.4

Dispersion around the at-risk-of-poverty threshold

	At-risk-of-poverty rate (threshold 40%)	At-risk-of-poverty rate (threshold 50%)	At-risk-of-poverty rate (threshold 70%)
Total	9.8	14.4	28.1
Males	9.9	14.3	27.1
Females	9.7	14.5	29.1

Gini coefficient

	Coefficient
Gini	33.9

1.2. Other indicators

2. ACCURACY

2.1. Sample design

The sample design has not changed since the beginning of the survey.

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.

The new 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.

The other sub-samples are formed with the households of the previous wave that have collaborated.

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 disaggegration.

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 wave 1 (survey 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 (wave 1) by Autonomous Community

Autonomous Community	Number of census sections	Number of addresses
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
Total	2,000	16,000

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 ¼ 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-subsample is 4.000 dwellings. The response rate within this subsample (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 about 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.

2.1.5. Sample selection schemes

In the new sub-sample, 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 February-July 2010. The income reference period is fixed (year 2009).

Sample distribution (collected household questionnaire) over the time

		Number	Percentage
February	21 to 31	33	0.2
March	1 to 10	825	6.1
	11 to 20	989	7.3
	21 to 31	1297	9.5
April	1 to 10	930	6.8
	11 to 20	1608	11.8
	21 to 31	1515	11.1
May	1 to 10	1372	10.1
	11 to 20	1704	12.5
	21 to 31	1121	8.2
June	1 to 10	1295	9.5
	11 to 20	633	4.7
	21 to 31	235	1.7
July	1 to 10	39	0.3
	11 to 20	1	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.

The numbers used in the variable DB075 (rotational group) is 1,2,3 and 4. In the 2010 survey, the rotational group of the new sub-sample is "2".

2.1.8. Weightings

The complete weighting procedure is described (it has not changed since the beginning of the survey):

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, ….

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.,

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

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:

$w_k^t = \frac{P_h}{\sum_{ji\in h} p_{hji}^t} = \frac{P_h}{p_h^t}$ 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 weigths 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:

$$WH_k = \frac{n^t_{ca}}{n_{ca}} WH^t_k$$

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

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

From 2005 onwards $\frac{n^t_{ca}}{n_{ca}}$ will be ¼ 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^t_i , we construct the **factor for persons aged 16 and over completing the Individual Questionnaire**, correcting non-response in Individual Questionnaires:

$$WCI^t_i = \frac{\sum_{j \in G_i} WP^t_j}{\sum_{j \in G_i} WP^t_j \cdot R_j} \cdot WP^t_i$$

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[1].

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:

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

[1] 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 ($\left(ci_{ca} = \sum_{t=1}^{4} ci_{ca}^{t} \right)$).

2.1.9. Substitutions

2.1.9.1. Method of selection of substitutions

As in previous years, 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 has 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 6403 (4003 are original households and 2400 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 dwelllings	3
Total households	4003

Number of original households in the new sub-sample

	Original units Number
Households accepted for database	2576
Households failed	1427
Total households	4003

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 subsistuted	1305
Failed original households not successfully subsistuted	122
Total failed original households	1427

Number of substituted households in the new sub-sample

	Substituted units
	Number
Substituted dwelling accepted in DB	1305
Households in same dwelllings	1
Other substituted household accepted in DB	16
Failed substituted household	1078
Total substituted households	2400

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

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	47	3.3	42	3.2
DB120 = 22	11	0.8	10	0.8
DB120 = 23	453	31.7	404	31.0
DB130 = 21	509	35.7	467	35.8
DB130 = 22	376	26.3	353	27.0
DB130 = 23	17	1.2	16	1.2
DB130 = 24	14	1.0	13	1.0
Total	1427	100.0	1305	100.0

2.2. Sampling errors

2.2.1. Standard errors and effective sample size

The following results are obtained using the Bootstrap method:

EU-SILC 2010 Indicators	ESTIMATE	COEFFICIENT OF VARIATION (%)	EFFECTIVE SAMPLE SIZE	DEFF
At-risk-of-poverty rate (after social transfer) by age and gender				
Total	20,7	2,12	7.883	1,69
0 le age le 15	25,3	3,51	8.971	1,49
16 le age le 24	25,3	4,20	8.492	1,57
25 le age le 49	18,6	2,73	8.816	1,52
50 le age le 64	18,1	3,72	8.567	1,56
65 le age	21,7	3,84	8.310	1,61
16 le age	19,9	2,13	8.080	1,65
16 le age le 64	19,4	2,33	8.622	1,55
0 le age le 64	20,5	2,31	8.563	1,56
Males	20,1	2,27	9.280	1,44
0 le age le 15	24,2	4,34	9.919	1,35
16 le age le 24	24,5	5,37	8.854	1,51
25 le age le 49	18,2	3,19	9.304	1,44
50 le age le 64	18,4	4,23	8.697	1,54
65 le age	19,9	4,49	10.089	1,32
16 le age	19,3	2,33	9.137	1,46
16 le age le 64	19,2	2,59	9.290	1,44
0 le age le 64	20,1	2,48	9.802	1,36
Females	21,3	2,31	7.341	1,82
0 le age le 15	26,4	4,39	9.341	1,43
16 le age le 24	26,2	5,63	7.822	1,71

25 le age le 49		18,9	2,97	8.761	1,52
50 le age le 64		17,9	4,21	9.037	1,48
65 le age		23,1	4,21	6.881	1,94
16 le age		20,4	2,32	7.323	1,82
16 le age le 64		19,7	2,55	8.221	1,63
0 le age le 64		20,9	2,55	8.139	1,64

At-risk-of-poverty rate by most frequent activity status and gender

Total	Employed	12,7	3,22	8.711	1,53
Unemployed		38,7	3,26	9.353	1,43
Retired		16,3	4,33	9.722	1,37
Other inactive		27,7	2,95	7.261	1,84
Not at work		26,8	2,39	7.701	1,73
Males	Employed	13,9	3,53	9.257	1,44
Unemployed		40,4	3,84	10.053	1,33
Retired		18	4,50	10.366	1,29
Other inactive		25	6,44	7.473	1,79
Not at work		26,2	2,93	8.745	1,53
Females	Employed	11,1	4,43	8.841	1,51
Unemployed		36,8	4,41	8.804	1,52
Retired		12,9	8,35	7.673	1,74
Other inactive		28,4	2,99	7.396	1,81
Not at work		27,3	2,59	6.960	1,92

At-risk-of-poverty rate by household type

One person household, under 65 years	22,2	7,17	6.911	1,93
One person household, 65 years and over	29,9	6,50	6.155	2,17
2 adults, no dependent children, both adults under 65 years	13,6	7,37	9.033	1,48
2 adults, no dep. children, at least 1 adult 65 years or more	22,2	4,99	9.601	1,39
Other households without dependent children	14,7	6,21	9.900	1,35
Single parent household, one or more dependent children	45,5	7,90	7.202	1,85
2 adults, one dependent child	18,2	6,38	9.083	1,47

2 adults, two dependent children	23,3	5,04	9.212	1,45
2 adults, three or more dependent children	44,2	8,59	6.115	2,18
Other households with dependent children	22,3	6,86	9.760	1,37
One person household, male	22,3	8,36	7.076	1,89
One person household, female	28,2	5,97	6.085	2,20
One person household, total	25,7	4,87	7.019	1,90
Households without dependent children	17,6	3,04	9.334	1,43
Household with dependent children	23,8	3,03	8.276	1,61
At-risk-of-poverty rate by accommodation tenure status				
Owner or rent free	19,1	2,36	8.225	1,62
Tenant	33,3	5,25	9.349	1,43
At-risk-of-poverty rate by work intensity of the household				
WI=0 (household without dependent children)	35,7	5,17	7.609	1,76
0<WI<1 (household without dependent children)	13,8	6,41	8.930	1,50
WI=1 (household without dependent children)	8,6	8,81	9.773	1,37
WI=0 (household with dependent children)	64,5	5,68	6.064	2,20
0<WI<0.5 (household with dependent children)	49,6	6,03	8.448	1,58
0.5<=WI<1 (household with dependent children)	25,3	4,69	8.721	1,53
WI=1 (household with dependent children)	10,5	7,78	8.395	1,59
At-risk-of-poverty threshold				
Threshold				
For a one person household (euros)	7818,2	0,78	8.931	1,50
For a one person household (PPS)	7995,5	0,78	8.932	1,50
For a 2 adults and 2 children household (euros)	16418,2	0,78	8.930	1,50
For a 2 adults and 2 children household (PPS)	16790,5	0,78	8.930	1,50

Inequality of income distribution S80/S20 income quintile share ratio

Ratio					
s80s20		6,9	3,08	8.204	1,63

Relative median at-risk-of-poverty gap by age and gender

Todos	Total	30,6	3,88	8.169	1,64
Menos de 16		35,5	5,05	16.230	0,82
De 16 a 64		34,9	3,69	9.686	1,38
65 y más años		16,6	4,01	27.763	0,48
16 y más años		29,4	3,27	10.917	1,22
Males	Total	32,4	4,14	5.400	2,47
De 16 a 64		36,9	4,55	9.384	1,42
65 y más años		16,6	4,66	33.704	0,40
16 y más años		31,6	4,40	6.342	2,11
Females	Total	29	3,36	14.340	0,93
De 16 a 64		33,3	4,45	6.361	2,10
65 y más años		16,6	4,49	21.657	0,62
16 y más años		28,4	2,75	15.251	0,88

Dispersion around the at-risk-of-poverty threshold

At-risk-of-poverty-rate (threshold 40%)				
All	9,8	3,39	9.535	1,40
Males	9,9	3,63	10.331	1,29
Females	9,7	3,71	8.930	1,50
At-risk-of-poverty-rate (threshold 50%)				

All	14,4	2,74	9.095	1,47
Males	14,3	2,97	9.555	1,40
Females	14,5	2,93	9.271	1,44

At-risk-of-poverty-rate
(threshold 70%)

All	28,1	1,51	8.860	1,51
Males	27,1	1,74	9.351	1,43
Females	29,1	1,61	8.680	1,54

At-risk-of-poverty rate before social transfers (including pensions) by age and gender

Total	0 le age	42,9	1,05	9.664	1,38
0 le age le 15		34,8	2,64	9.193	1,45
16 le age le 64		34,9	1,37	10.288	1,30
65 le age		83,5	0,79	8.764	1,52
16 le age		44,5	1,02	10.013	1,33
Males	0 le age	41,2	1,21	10.066	1,33
0 le age le 15		33,6	3,41	9.730	1,37
16 le age le 64		34,2	1,60	10.164	1,31
65 le age		83,5	1,03	8.313	1,61
16 le age		42,8	1,20	10.065	1,33
Females	0 le age	44,6	1,12	9.166	1,46
0 le age le 15		36,1	3,40	9.036	1,48
16 le age le 64		35,5	1,49	10.221	1,31
65 le age		83,5	0,88	8.760	1,53
16 le age		46,1	1,08	9.325	1,43

At-risk-of-poverty rate before social transfers (excluding pensions) by age and gender

Total	0 le age	28,1	1,51	9.001	1,48
0 le age le 15		32,9	2,77	9.196	1,45
16 le age le 64		27,5	1,67	9.752	1,37
65 le age		26	3,39	8.080	1,65
16 le age		27,2	1,54	9.242	1,45
Males	0 le age	27,7	1,68	9.500	1,41
0 le age le 15		31,7	3,58	9.707	1,38
16 le age le 64		27,5	1,89	9.835	1,36
65 le age		24	4,00	9.356	1,43
16 le age		26,9	1,73	9.753	1,37
Females	0 le age	28,5	1,68	8.593	1,55
0 le age le 15		34,2	3,55	9.037	1,48
16 le age le 64		27,5	1,86	9.388	1,42
65 le age		27,5	3,74	6.864	1,95
16 le age		27,5	1,69	8.678	1,54

Gini coefficient

Coefficient				
Gini	33,9	1,09	7.064	1,89

Equivalised disposable income (mean)

Equivalised disposable income	14747	0,78	7.571	1,76

2.3. Non-sampling errors

2.3.1. Sampling frame and coverage errors

The sampling frame is the Municipal Register.

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-2010 was obtained with the Register dated 04.03.2009.

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

                       11.3
```

2.3.2. Measurement and processing errors

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 previous 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.

There have been some minor changes in the questionnaires on an ongoing basis in response to the final reports of the 38 Area Heads in charge of fieldwork, and to follow Eurostat recommendations on some specific variables.

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

As in previous years, 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

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

	Number
Group 1	3482
Group 2	3898
Group 3	3022
Group 4	3195
Total	13597

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). Rotational grou

	Number
Group 1	7830
Group 2	8426
Group 3	6899
Group 4	7328
Total	30483

2.3.3.2. Unit non-response

Unit non-response. Rotational group and total

		Group 2
All households	Ra	0.98
	Rh	0.70
	NRh	31.36
	Rp	0.98
	NRp	2.00
	NRp2	32.73
Original households	Ra	0.98
	Rh	0.74
	NRh	27.44
	Rp	0.99
	NRp	1.49
	NRp2	28.52

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

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), for each rotational group and for the total

Distribution of original units by record of contact at address. Rotational group and total

			Number	Percentage
Group 1	Total		4039	100.0
	Contacted		3948	97.7
	Non contacted		91	2.3
	Non contacted		91	100.0
		Can not be located	52	57.1
		Unable to access	2	2.2
		Not exists or non-res.	37	40.7
Group 2	Total		4003	100.0
	Contacted		3492	87.2
	Non contacted		511	12.8
	Non contacted		511	100.0
		Can not be located	47	9.2
		Unable to access	11	2.2
		Not exists or non-res.	453	88.6
Group 3	Total		3361	100.0
	Contacted		3294	98.0
	Non contacted		67	2.0
	Non contacted		67	100.0
		Can not be located	32	47.8
		Not exists or non-res.	35	52.2
Group 4	Total		3647	100.0
	Contacted		3561	97.6
	Non contacted		86	2.4
	Non contacted		86	100.0
		Can not be located	53	61.6
		Unable to access	3	3.5
		Not exists or non-res.	30	34.9
Total	Total		15050	100.0
	Contacted		14295	95.0
	Non contacted		755	5.0
	Non contacted		755	100.0
		Can not be located	184	24.4
		Unable to access	16	2.1
		Not exists or non-res.	555	73.5

Distribution of original address contacted by household questionnaire result and by household interview acceptance. Rotational group and total

			Number	Percentage
Group 1	Total		3948	100.0
	Household q. completed		3482	88.2
	Interv. not completed		466	11.8
	Interv. not completed		466	100.0
		Refusal to cooperate	334	71.7
		Temporaly away	109	23.4
		Unable to respond	15	3.2
		Other reasons	8	1.7
	Household q. completed	Interview accepted	3482	100.0
Group 2	Total		3492	100.0
	Household q. completed		2576	73.8
	Interv. not completed		916	26.2
	Interv. not completed		916	100.0
		Refusal to cooperate	509	55.6
		Temporaly away	376	41.0
		Unable to respond	17	1.9

		Other reasons	14	1.5
	Household q. completed	Interview accepted	2576	100.0
Group 3	Total		3294	100.0
	Household q. completed		3022	91.7
	Interv. not completed		272	8.3
	Interv. not completed		272	100.0
		Refusal to cooperate	179	65.8
		Temporaly away	71	26.1
		Unable to respond	11	4.0
		Other reasons	11	4.0
	Household q. completed	Interview accepted	3022	100.0
Group 4	Total		3561	100.0
	Household q. completed		3196	89.8
	Interv. not completed		365	10.2
	Interv. not completed		365	100.0
		Refusal to cooperate	246	67.4
		Temporaly away	100	27.4
		Unable to respond	14	3.8
		Other reasons	5	1.4
	Household q. completed	Interview accepted	3195	100.0
		Interview rejected	1	0.0
Total	Total		14295	100.0
	Household q. completed		12276	85.9
	Interv. not completed		2019	14.1
	Interv. not completed		2019	100.0
		Refusal to cooperate	1268	62.8
		Temporaly away	656	32.5
		Unable to respond	57	2.8
		Other reasons	38	1.9
	Household q. completed	Interview accepted	12275	100.0
		Interview rejected	1	0.0

2.3.3.4. Distribution of substituted units by ‘record of contact at address’ (DB120), by ‘household questionnaire result’ (DB130) and by ‘household interview acceptance’ (DB135), for each rotational group and for the total

Distribution of substituted units by record of contact at address. Rotational group and total

			Number	Percentage
Group 2	Total		2400	100.0
	Contacted		2065	86.0
	Non contacted		335	14.0
	Non contacted		335	100.0
		Can not be located	53	15.8
		Unable to access	11	3.3
		Not exists or non-res.	271	80.9
Total	Total		2400	100.0
	Contacted		2065	86.0
	Non contacted		335	14.0
	Non contacted		335	100.0
		Can not be located	53	15.8
		Unable to access	11	3.3
		Not exists or non-res.	271	80.9

Distribution of substituted address contacted by household questionnaire result and by household interview acceptance. Rotational group and total

			Number	Percentage
Group 2	Total		2065	100.0
	Household q. completed		1322	64.0
	Interv. not completed		743	36.0
	Interv. not completed		743	100.0
		Refusal to cooperate	355	47.8
		Temporaly away	366	49.3
		Unable to respond	16	2.2
		Other reasons	6	0.8
Total	Total		2065	100.0
	Household q. completed		1322	64.0
	Interv. not completed		743	36.0
	Interv. not completed		743	100.0
		Refusal to cooperate	355	47.8
		Temporaly away	366	49.3
		Unable to respond	16	2.2
		Other reasons	6	0.8

2.3.3.5. Item non-response

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	99.3	2.5	30.9	66.6
T. d. h. income before s. tr. other than old_age and surv. ben.	98.0	3.1	30.2	66.6
T. d. h. income before s. tr. including old_age and surv. ben.	88.3	5.9	30.5	63.7
Net income from rental of a property or land	6.9	3.1	10.0	86.9
Family/children-related allowances	4.5	1.3	0.3	98.4
Social exclusion not elsewhere classified	2.8	0.3	0.0	99.7
Housing allowances	1.6	5.2	0.0	94.8
Regular inter-household cash transfer received	3.4	3.4	0.0	96.6
Net interest, div., profit from capital invest. in uninc. business	28.3	25.4	37.7	37.0
Net income received by people aged under 16	3.1	1.0	0.0	99.0
Regular taxes on wealth	0.0	.	.	.
Regular inter-household cash transfer paid	6.5	3.1	0.1	96.8
Repayments/receipts for tax adjustments	73.6	5.7	2.2	92.1

	% 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	44.7	7.8	0.0	92.2
Net non-cash employee income	5.8	15.7	1.5	82.8
Net cash profits or losses from self-employment	6.9	18.5	52.6	28.9
Net pension from individual private plans	0.7	11.9	0.0	88.1
Net unemployment benefits	9.3	2.2	0.0	97.7
Net old-age benefits	20.6	2.9	0.1	97.0
Net survivors benefits	1.6	1.6	0.0	98.4
Net sickness benefits	1.1	3.5	0.0	96.5
Net disability benefits	2.5	2.8	0.0	97.2
Education-related allowances	2.3	2.9	0.0	97.1
Gross monthly earnings for employees	35.1	4.8	46.5	49.2

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	98.9	2.5	54.1	43.4
Gross income from rental of a property or land	6.9	3.1	23.7	73.2
Gross family/children-related allowances	4.5	1.3	4.5	94.2
Gross social exclusion not elsewhere classified	2.8	0.3	0.0	99.7
Gross housing allowances	1.6	5.2	0.0	94.8
Gross regular inter-household cash transfer received	3.4	3.4	0.0	96.6
Gross interest, div., profit from capital invest. in uninc. business	28.3	25.4	38.5	36.1
Gross income received by people aged under 16	3.1	1.0	0.0	99.0
Gross regular taxes on wealth	0.0	.	.	.
Gross regular inter-household cash transfer paid	6.5	3.1	0.1	96.8

	% persons 16+ having received an amount	% 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	44.7	7.8	43.6	48.6
Gross non-cash employee income	0.7	12.5	0.0	87.5
Gross cash profits or losses from self-employment	6.9	16.6	36.3	47.1
Gross pension from individual private plans	0.7	11.9	2.2	85.9
Gross unemployment benefits	9.3	2.2	13.6	84.2
Gross old-age benefits	20.6	2.9	13.0	84.1
Gross survivors benefits	1.6	1.6	5.3	93.1
Gross sickness benefits	1.1	3.5	20.2	76.3
Gross disability benefits	2.5	2.8	0.0	97.2
Gross education-related allowances	2.3	2.9	0.0	97.1

2.3.3.6. Total item non-response and number of observations in the sample at unit level of the common cross-sectional European Union indicators based on the cross-sectional component of EU-SILC, for equivalised disposable income and for the unadjusted gender pay gap

At-risk-of-poverty rate (after social transfer) by age and gender

		Number of sample observations (below poverty line)	Number of sample observations no taken into account due to the non-response for an item (classif. variable)	Number of sample observations no taken into account due to the non-response for an item (income variable)	Non-response at household level (db135 = 2 or db120 in (21, 22))
Total	0 le age	8377	0	0	265
	0 le age le 15	1758	0	0	265
	16 le age le 24	976	0	0	265
	25 le age le 49	2718	0	0	265
	50 le age le 64	1371	0	0	265
	65 le age	1554	0	0	265
	16 le age	6619	0	0	265
	16 le age le 64	5065	0	0	265
	0 le age le 64	6823	0	0	265
Males	0 le age	3973	0	0	265
	0 le age le 15	892	0	0	265
	16 le age le 24	482	0	0	265
	25 le age le 49	1294	0	0	265
	50 le age le 64	657	0	0	265
	65 le age	648	0	0	265
	16 le age	3081	0	0	265
	16 le age le 64	2433	0	0	265
	0 le age le 64	3325	0	0	265
Females	0 le age	4404	0	0	265
	0 le age le 15	866	0	0	265
	16 le age le 24	494	0	0	265
	25 le age le 49	1424	0	0	265
	50 le age le 64	714	0	0	265
	65 le age	906	0	0	265
	16 le age	3538	0	0	265
	16 le age le 64	2632	0	0	265
	0 le age le 64	3498	0	0	265

At-risk-of-poverty rate by household type

	Number of sample observations (below poverty line)	Num. sample obs. no taken into account due to non-resp. for item or at indiv. level (classif. var.)	Number of sample observations no taken into account due to the non-response for an item (income variable)	Non-response at household level (db135 = 2 or db120 in (21, 22)) ()
One person household, under 65 years	310	13	0	265
One person household, 65 years and over	382	13	0	265
2 ad., no dep. children, both ad. under 65 years	552	13	0	265
2 ad., no dep. ch.,at least 1 ad. 65 y. or more	972	13	0	265
Other households without dependent children	1037	13	0	265
Single parent household, 1 or more dep. children	424	13	0	265
2 adults, one dependent child	807	13	0	265
2 adults, two dependent children	1660	13	0	265
2 adults, three or more dependent children	826	13	0	265
Other households with dependent children	1407	13	0	265
One person household, male	223	13	0	265
One person household, female	469	13	0	265
One person household, total	692	13	0	265

Households without dependent children		3253	13	0	265
Household with dependent children		5124	13	0	265

At-risk-of-poverty rate by accommodation tenure status

	Number of sample observations (below poverty line)	Number of sample observations no taken into account due to the non-response for an item (classif. variable)	Number of sample observations no taken into account due to the non-response for an item (income variable)	Non-response at household level (db135 = 2 or db120 in (21, 22))
Owner or rent free	6848	0	0	265
Tenant	1529	0	0	265

At-risk-of-poverty threshold

	Number of sample observations	Number of sample observations no taken into account due to the non-response for an item (income variable)	Non-response at household level (db135 = 2 or db120 in (21, 22))
Threshold	37026	0	265

Inequality of income distribution S80/S20 income quintile share ratio

	Number of sample observations	Number of sample observations no taken into account due to the non-response for an item (income variable)	Non-response at household level (db135 = 2 or db120 in (21, 22))
Ratio	37026	0	265

Relative median at-risk-of-poverty gap by age and gender

		Number of sample observations (below poverty line)	Number of sample observations no taken into account due to the non-response for an item (classif. variable)	Number of sample observations no taken into account due to the non-response for an item (income variable)	Non-response at household level (db135 = 2 or db120 in (21, 22))
Total	0 le age	8377	0	0	265
	16 le age le 64	5065	0	0	265
	65 le age	1554	0	0	265
	0 le age le 15	1758	0	0	265
	16 le age	6619	0	0	265
Males	0 le age	3973	0	0	265
	16 le age le 64	2433	0	0	265
	65 le age	648	0	0	265
	16 le age	3081	0	0	265
Females	0 le age	4404	0	0	265
	16 le age le 64	2632	0	0	265

	65 le age	906	0	0	265
	16 le age	3538	0	0	265

Dispersion around the at-risk-of-poverty threshold (At-risk-of-poverty-rate (threshold 40%))

	Number of sample observations (below poverty line)	Number of sample observations no taken into account due to the non-response for an item (income variable)	Non-response at household level (db135 = 2 or db120 in (21, 22))
All	3923	0	265
Males	1915	0	265
Females	2008	0	265

Dispersion around the at-risk-of-poverty threshold (At-risk-of-poverty-rate (threshold 70%))

	Number of sample observations (below poverty line)	Number of sample observations no taken into account due to the non-response for an item (income variable)	Non-response at household level (db135 = 2 or db120 in (21, 22))
All	11101	0	265
Males	5245	0	265
Females	5856	0	265

Dispersion around the at-risk-of-poverty threshold (At-risk-of-poverty-rate (threshold 50%))

	Number of sample observations (below poverty line)	Number of sample observations no taken into account due to the non-response for an item (classif. variable)	Number of sample observations no taken into account due to the non-response for an item (income variable)	Non-response at household level (db135 = 2 or db120 in (21, 22))
All	5832	0	0	265
Males	2802	0	0	265
Females	3030	0	0	265

At-risk-of-poverty rate before social transfers (including pensions) by age and gender

		Number of sample observations (below poverty line)	Number of sample observations no taken into account due to the non-response for an item (classif. variable)	Number of sample observations no taken into account due to the non-response for an item (income variable)	Non-response at household level (db135 = 2 or db120 in (21, 22))
Total	0 le age	17164	0	0	265
	0 le age le 15	2323	0	0	265
	16 le age le 64	9119	0	0	265
	65 le age	5722	0	0	265
	16 le age	14841	0	0	265
Males	0 le age	8043	0	0	265

	0 le age le 15	1183	0	0	265
	16 le age le 64	4364	0	0	265
	65 le age	2496	0	0	265
	16 le age	6860	0	0	265
Females	0 le age	9121	0	0	265
	0 le age le 15	1140	0	0	265
	16 le age le 64	4755	0	0	265
	65 le age	3226	0	0	265
	16 le age	7981	0	0	265

At-risk-of-poverty rate before social transfers (excluding pensions) by age and gender

		Number of sample observations (below poverty line)	Number of sample observations no taken into account due to the non-response for an item (classif. variable)	Number of sample observations no taken into account due to the non-response for an item (income variable)	Non-response at household level (db135 = 2 or db120 in (21, 22))
Total	0 le age	10948	0	0	265
	0 le age le 15	2169	0	0	265
	16 le age le 64	6967	0	0	265
	65 le age	1812	0	0	265
	16 le age	8779	0	0	265
Males	0 le age	5265	0	0	265
	0 le age le 15	1105	0	0	265
	16 le age le 64	3402	0	0	265
	65 le age	758	0	0	265
	16 le age	4160	0	0	265
Females	0 le age	5683	0	0	265
	0 le age le 15	1064	0	0	265
	16 le age le 64	3565	0	0	265
	65 le age	1054	0	0	265
	16 le age	4619	0	0	265

Gini coefficient

	Number of sample observations	Number of sample observations no taken into account due to the non-response for an item (income variable)	Non-response at household level (db135 = 2 or db120 in (21, 22))
Gini	37026	0	265

Equivalised disposable income (mean)

	Number of sample observations	Number of sample observations no taken into account due to the non-response for an item (income variable)	Non-response at household level (db135 = 2 or db120 in (21, 22))
Equivalised disposable income	37026	0	265

2.4. Mode of data collection

Questionnaires are completed by CAPI (Compute Aided Personal Interviewing). This procedure has been implemented since 2005 (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.

Distribution of household members aged 16 and over by RB250. Rotational group and total

		Number	Percentage
Group 1	Total	7945	100.0
	RB250=11	7830	98.6
	RB250=14	115	1.4
Group 2	Total	8598	100.0
	RB250=11	8426	98.0
	RB250=14	172	2.0
Group 3	Total	6984	100.0
	RB250=11	6899	98.8
	RB250=14	85	1.2
Group 4	Total	7426	100.0
	RB250=11	7328	98.7
	RB250=14	98	1.3
Total	Total	30953	100.0
	RB250=11	30483	98.5
	RB250=14	470	1.5

Distribution of household members aged 16 and over by RB260. Rotational group and total

		Number	Percentage
Group 1	Total	7830	100.0
	RB260=2	4674	59.7
	RB260=3	1458	18.6
	RB260=5	1698	21.7
Group 2	Total	8426	100.0
	RB260=2	5582	66.2
	RB260=3	1154	13.7
	RB260=5	1690	20.1
Group 3	Total	6899	100.0
	RB260=2	4111	59.6
	RB260=3	1146	16.6
	RB260=5	1642	23.8
Group 4	Total	7328	100.0
	RB260=2	4316	58.9
	RB260=3	1377	18.8
	RB260=5	1635	22.3
Total	Total	30483	100.0
	RB260=2	18683	61.3
	RB260=3	5135	16.8
	RB260=5	6665	21.9

2.5. Interview duration

The mean interview duration per household is calculated as the sum of the duration of all household interviews plus the sum of the duration of all personal interviews, divided by the number of household questionnaires completed and accepted for the database. The duration of the household and personal register is not included.

The extra time to establish the contact, to explain the content, to arrange additional contacts, is not included.

In this wave CAPI has been used, as in the previous one (only in 2004 PAPI was used). The duration has been automatically calculated from the first question to the last one. The extra time is not included in the results.

It has been informed by the interviewers the excessive duration of the interview having an impact on the quality of the information collected.

Interview duration

	Mean
	32

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
Present: - Usually resident at the address - Related to other household members - Share expenses	(No differences between national and EU-SILC concept.)
Present: - Usually resident at the address - Not related to household members - Share expenses	(No differences between national and EU-SILC concept.)
Present: - Resident boarders, lodgers, tenants - Have no private address elsewhere - Share expenses	(No differences between national and EU-SILC concept.)
Present: - Resident boarders, lodgers, tenants - Actual or intended length of stay is 6 months or more - Share expenses	• *Have other address they treat as their usual residence.* ***Not a member of the interviewed household.*** • Otherwise: No differences between national and EU-SILC concept.
Present: - Visitors - Have no private address elsewhere - Share expenses	No differences between national and EU-SILC concept.

Present: - Visitors - Actual or intended length of stay is 6 months or more - Share expenses	• *Have other address they treat as their usual residence.* ***Not a member of the interviewed household.*** • Otherwise: No differences between national and EU-SILC concept.
Present: - Live-in domestic employees, au pairs - Have no private address elsewhere - Share expenses	No differences between national and EU-SILC concept.
Present: - Live-in domestic employees, au pairs - Actual or intended length of stay is 6 months or more - Share expenses	• *Have other address they treat as their usual residence.* ***Not a household member.*** • Otherwise: No differences between national and EU-SILC concept.
Absent: - Temporarily absent owing to holiday leave, work reasons, studies and similar - Have no private address elsewhere - Actual or intended length of stay is less than 6 months - Share expenses	No differences between national and EU-SILC concept.
Absent: - Temporarily absent owing to holiday leave, work reasons, studies and similar - Have no private address elsewhere - Actual or intended length of stay is more than 6 months - Very close ties to household - Share expenses	No differences between national and EU-SILC concept.

Absent: - Children of the household - Receiving education away from home - Have no private address elsewhere - Treat this address as their main residence - Share expenses	No differences between national and EU-SILC concept.
Absent: - Persons with ties to the household away for extended periods for work reasons - Have no private address elsewhere - Must be a household member's partner or child - Treat this address as their main residence - Share expenses	No differences between national and EU-SILC concept.
Absent: - Temporarily absent persons with ties to the household - In hospital, clinic or other institution - Have financial ties to the household - Actual or intended length of absence must be less than 6 - Share expenses (financial ties)	No differences between national and EU-SILC concept.

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)
Present: - Has no other address he/she treats as usual residence - Shares income or expenditures with the household	No differences between national and EU-SILC concept.
Absent: - In hospital, clinic or other institution, such as nursing home, prison, etc. - Total length of stay to be less than 6 months - Considers this his/her usual residence - Shares income or expenditures with the household	No differences between national and EU-SILC concept.
Absent: - Work reasons - Considers this his/her usual residence - Shares income or expenditures with the household	No differences between national and EU-SILC concept.
Absent: - Study reasons - Considers this his/her usual residence - Shares income or expenditures with the household	No differences between national and EU-SILC concept.

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.

- Reference period for taxes on wealth.

Taxes on wealth has been suppressed for 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-June). The lag thus ranged from 2 to 6 months.

- Total duration of the data collection of the sample.

March to June of the survey year.

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

We used the definition given in the document SILC065.

- 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.

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

(No differences between national and EU-SILC concept.).
Provided for this survey.

- Income from rental of property or land.

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

- Income received by people aged under 16.

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

- Regular taxes on wealth.

Taxes on wealth has been suppressed for the income reference period.
(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 for this survey.
Only the compulsory social contributions are included. The voluntary social contributions are excluded. According to the Labour Cost Survey (2008) the employers contributions to private plans are a 3% of the compulsory contributions.

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

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

- 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.)

- Contributions to individual private pension plans.

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

- Pension from individual private plans (other than those covered under ESSPROSS).

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

- Gross monthly earnings for employees.

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

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

As in previous years, 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

As in previous years, we gave respondents the option of reporting income gross and/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

As in previous years:

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.

Current monthly earnings for employees are reported gross. Interviewees were asked to report figures both net (of income tax at source and social security contributions) and gross (the latter generated many ‘not available’ entries).

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 2009
- 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)
- Tax Authorities 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 2010. Source: Spanish Living Conditions Survey (SILC 2010). Adult recipients by income type (net figures)

	Recipients (thousands)	Average income 2009 (euros)	Average monthly income 2009 (euros)	Total income 2009 (millions of euros)
Cash employee income	18.427	15.353	1.097	282.908
Non-cash employee income	2.663	1.624	116	4.325
Cash profits or losses from self-employment	2.689	8.387	599	22.554
Unemployment benefits	3.963	4.631	331	18.351
Old-age benefits	5.744	12.133	867	69.691
Survivors benefits	1.722	8.153	582	14.044
Disability benefits	1.083	9.068	648	9.819

SILC 2010. Source: Spanish Living Conditions Survey (SILC 2010). Adult recipients by income type (gross figures)

	Recipients (thousands)	Average income 2009 (euros)	Average monthly income 2009 (euros)	Total income 2009 (millions of euros)
Cash employee income	18.427	18.626	1.330	343.235
Non-cash employee income	2.663	1.624	116	4.325

Cash profits or losses from self-employment	2.689	11.765	840	31.638
Unemployment benefits	3.963	4.761	340	18.870
Old-age benefits	5.744	12.815	915	73.610
Survivors benefits	1.722	8.319	594	14.330
Disability benefits	1.083	9.150	654	9.907

SILC 2010. Source: Spanish Living Conditions Survey (SILC 2010). Recipient households by income type (net figures)

	Recipient households (thousands	Average income 2009 (euros)	Total income 2009 (millions of euros)
Income from rental of a property or land	1.081	6.641	7.178
Interest, div., profit from capital invest.	4.308	950	4.091

SILC 2010. Source: Spanish Living Conditions Survey (SILC 2010). Recipient households by income type (gross figures)

	Recipient households (thousands	Average income 2009 (euros)	Total income 2009 (millions of euros)
Income from rental of a property or land	1.081	7.418	8.018
Interest, div., profit from capital invest.	4.308	1.106	4.765

The results for the activity are:

SILC 2010. Source: Spanish Living Conditions Survey (SILC 2010). Adults by activity status (thousands)

	Persons (thousands)	Adults (percentages)
Total	38.450,8	100.0
Employment	17.787,2	46.3
Unemployment	3.889,3	10.1
Inactive population	16.694,4	43.4
Missing	80,0	0.2

SILC 2009

These results for the previous year are:

SILC 2009. Source: Spanish Living Conditions Survey (SILC 2009). Adult recipients by income type (net figures)

	Recipients (thousands)	Average income 2008 (euros)	Average monthly income 2008 (euros)	Total income 2008 (millions of euros)
Cash employee income	19.098	15.414	1.101	294.383
Non-cash employee income	2.850	1.586	113	4.518
Cash profits or losses from self-employment	2.905	9.492	678	27.575
Unemployment benefits	3.165	3.932	281	12.444
Old-age benefits	5.824	11.952	854	69.603
Survivors benefits	1.643	7.875	563	12.938
Disability benefits	973	9.320	666	9.068

SILC 2009. Source: Spanish Living Conditions Survey (SILC 2009). Adult recipients by income type (gross figures)

	Recipients (thousands)	Average income 2008 (euros)	Average monthly income 2008 (euros)	Total income 2008 (millions of euros)
Cash employee income	19.098	18.627	1.331	355.749
Non-cash employee income	2.850	1.586	113	4.518
Cash profits or losses from self-employment	2.905	12.596	900	36.594
Unemployment benefits	3.165	4.022	287	12.730
Old-age benefits	5.824	12.655	904	73.697
Survivors benefits	1.643	8.008	572	13.157
Disability benefits	973	9.390	671	9.136

SILC 2009. Source: Spanish Living Conditions Survey (SILC 2009). Recipient households by income type (net figures)

	Recipient households (thousands	Average income 2008 (euros)	Total income 2008 (millions of euros)
Income from rental of a property or land	1.043	6.562	6.847
Interest, div., profit from capital invest.	4.565	975	4.450

SILC 2009. Source: Spanish Living Conditions Survey (SILC 2009). Recipient households by income type (gross figures)

	Recipient households (thousands	Average income 2008 (euros)	Total income 2008 (millions of euros)
Income from rental of a property or land	1.043	7.351	7.670
Interest, div., profit from capital invest.	4.565	1.143	5.217

We can observe a reduction in the average income in some components. We also observe an increase of the number of recipients of unemployment benefits..

LFS

The number of persons by activity status according to the LFS (first quarter of 2010) is:

	Persons (thousands)	Adults (percentages)
Total	38.450,8	100.0
Employment	18.394,2	47,8
Unemployment	4.612,7	12,0
Inactive population	15.444,0	40,2

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 2009. 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	403.197
B.3b	Gross mixed income	175.720
D.621	Social security benefits in cash	133.225
D.41	Interest	26.005
D.42	Income distributed by corporations	22.944
D.45	Income from land	844

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: 343.235 + 4.325 = 347.560 (survey 2010). For NA the employee income is 403.197 (year 2009).

‘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 2009

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

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

	2009	
	Number	Average figure
TOTAL		
Total	8.531,93	754,06
Permanent disability	920,86	831,49
Retirement	5.038,86	854,12
Widowhood	2.270,28	553,89
Orphanhood	264,20	339,71

Benefits not tied to contributions 2009

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

Units: Number of beneficiaries (annual average)

	2009

SOCIAL SECURITY PENSIONS NOT TIED TO CONTRIBUTIONS (1)	458.034
Disability	197.126
Retirement	260.908

Comparing the number of benefits payees by type, we find the largest differences relate to survivors' benefits, 1.722 as against 2.270,28+264,20 (= 2.534,48). 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 (2.681.223 in 2009). Other benefits and the turnover of unemployed workers in the year are not reflected, therefore.

Tax Authorities sources

In relation to Fiscal sources the Tax Agency produces yearly the publication *Mercado de Trabajo y Pensiones en Las Fuentes Tributarias 2009* (Labour market and Pensions in Tax Sources). The reference period is the year 2009 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	18.451.827	19.085

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	8.996.206	11.364

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	5.525.758	4.010

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.

5. ANNEX. ASSESSMENT OF THE MODULE 2010

We don’t report any particular problem in the data collection of the module of the 2010 survey.