INTERMEDIATE QUALITY REPORT

Cross-Sectional Survey 2005

ITALY

1. COMMON CROSS-SECTIONAL EUROPEAN UNION INDICATORS

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

In the following tables the poverty threshold at 60% median equivalized income and the at-risk of poverty rate are reported. The at-risk poverty rate is shown by age, by gender, by most frequent activity status, by household type, by tenure status and by household working intensity. Dispersion around at-risk-poverty-threshold is also calculated. Moreover the at-risk poverty rate before social transfers and the relative median risk-of-poverty gap are shown**.** As far other income distribution indicators are concerned the S80/S20 quintile share ratio and the Gini coefficient are given. For each breakdown the sample dimension, the distributions among the total population and the poor population are shown.

LI01: At-Risk-of-poverty thresholds

	Household Type	
CURRENCY	Single person	2 adults with two children
Euro	8633	18130
National Currency	8633	18130
Purchasing Power Parities	8670	18207

LI02: At-risk-poverty-rate by age and gender

	At-risk-poverty-rate			Sample size N			Distribution of total population			Distribution of poor population		
AGE	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
Less than 16 years	25	23	24	880	949	1829	14.4	16.1	15.2	17.3	21.2	19.0
16 to 24 years	25	21	23	586	484	1070	9.0	10.0	9.5	10.8	12.1	11.4
25 to 49 years	17	15	16	1655	1379	3034	36.5	39.0	37.7	30.8	34.2	32.3
50 to 64 years	16	13	15	837	664	1501	18.4	18.5	18.4	13.9	14.3	14.1
65 years and over	26	19	23	1507	883	2390	21.8	16.6	19.3	27.1	18.2	23.2
16 to 64 years	18	15	17	3078	2527	5605	63.9	67.4	65.6	55.6	60.6	57.8
16 years and over	20	16	18	4585	3410	7995	85.6	83.9	84.8	82.7	78.8	81.0
Less than 65 years	19	17	18	3958	3476	7434	78.2	83.4	80.8	72.9	81.8	76.8
Total	**21**	**17**	**19**	**5465**	**4359**	**9824**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

LI03: At-risk-poverty-rate by household type

HOUSEHOLD TYPE	At-risk-poverty-rate	Sample size N	Distribution of total population	Distribution of poor population
Single person	28	1535	11.4	16.8
Single female	34	1137	6.8	12.2
Single male	19	398	4.6	4.6
One adult younger than 65 years	21	539	5.7	6.4
One adult, 65 years and over	35	996	5.7	10.4
Single parent with at least one dependent child	35	498	2.4	4.4
2 adults with one dependent child	15	936	12.4	10.2
2 adults with two dependent children	22	1844	17.9	20.3
2 adults with three or more dependent children	35	949	5.0	9.2
Three or more adults with dependent children	21	1253	11.8	13.1
Households with dependent children	22	5480	49.4	57.0
2 adults, no dependent children, both adults under 65 years	10	552	9.2	4.8
2 adults, no dependent children, at least one adult 65 years and over	20	1296	11.5	12.1
Other households without dependent children	10	1034	18.5	9.3
Households without dependent children	16	4417	50.6	43.0
Total	**19**	**9897**	**100.0**	**100.0**

LI04: At-risk-poverty-rate by most frequent activity and gender

MOST FREQUENT ACTIVITY	At-risk-poverty-rate			Sample size N			Distribution of total population			Distribution of poor population		
	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
At work	6	11	9	484	1160	1644	33.5	57.0	44.8	10.4	37.9	22.1
Not at work	27	23	25	4069	2195	6264	66.5	43.0	55.2	89.6	62.1	77.9
Unemployed	39	49	44	534	545	1079	5.8	5.6	5.7	11.4	17.2	13.9
Retired	17	15	16	744	880	1624	16.7	23.3	19.9	14.3	22.6	17.8
Other inactive	29	25	28	2791	770	3561	44.0	14.2	29.7	63.9	22.2	46.2
Total population 16 years and over	**20**	**16**	**18**	**4553**	**3355**	**7908**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

LI06: At-risk-poverty-rate by work intensity of the household

HOUSEHOLD TYPE	HOUSEHOLD WORK INTENSITY	At-risk-poverty-rate	Sample size N	Distribution of total population	Distribution of poor population
Households with dependent children	Household with work intensity = 1	5	525	20.7	5.5
	Household with work intensity >= 0.5 and < 1	24	2722	26.9	36.4

Households without dependent children	Household with work intensity > 0 and < 0.5	46	1067	5.5	14.1
	Household with work intensity = 0	70	1159	3.5	13.9
	Household with work intensity = 1	5	255	15.0	4.0
	Household with work intensity > 0 and < 1	9	797	18.7	9.4
	Household with work intensity = 0	31	1479	9.7	16.6

LI08: At-risk-poverty-rate by tenure status

TENURE STATUS	At-risk-poverty-rate	Sample size N	Distribution of total population	Distribution of poor population
Owner or rent free	17	7459	82.0	72.2
Tenant / subtenant, paying rent	29	2438	18.0	27.8
Total	**19**	**9897**	**100.0**	**100.0**

LI09: At-risk-poverty-rate by age and gender before social transfers and pensions

	At-risk-poverty-rate			Sample size N			Distribution of total population			Distribution of poor population		
AGE	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
Less than 16 years	35	31	33	1290	1346	2636	14.4	16.1	15.2	10.8	12.6	11.
16 to 64 years	36	31	33	6525	5471	11996	63.9	67.4	65.6	49.1	52.4	50.
65 years and over	86	83	85	5174	3782	8956	21.8	16.6	19.3	40.1	35.0	37.
16 years and over	49	41	45	11699	9253	20952	85.6	83.9	84.8	89.2	87.4	88.
Total	**47**	**40**	**43**	**12989**	**1059 9**	**23588**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.**

LI10: At-risk-poverty-rate by age and gender before social transfers excluding pensions

	At-risk-poverty-rate			Sample size N			Distribution of total population			Distribution of poor population		
AGE	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
Less than 16 years	33	29	31	1192	1247	2439	14.4	16.1	15.2	18.6	21.7	20.0
16 to 64 years	23	20	21	3903	3310	7213	63.9	67.4	65.6	57.5	62.0	59.5
65 years and over	28	21	25	1648	999	2647	21.8	16.6	19.3	23.9	16.3	20.5
16 years and over	24	20	22	5551	4309	9860	85.6	83.9	84.8	81.4	78.3	80.0
Total	**25**	**22**	**24**	**6743**	**5556**	**1229 9**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

LI11: Relative at risk-of-poverty gaps

	Relative at risk-of-poverty gap			Sample size N		
AGE	Female	Male	Total	Female	Male	Total
Less than 16 years			28			1902
16 to 64 years	28	27	28	3078	2527	5605
65 years and over	19	16	18	1507	883	2390
16 years and over	23	24	23	4585	3410	7995
Total	**24**	**25**	**24**	**5495**	**4402**	**9897**

DI11: S80/S20 income quintile share ratio

S80/S20 income quintile share ratio
5.6

DI12: Gini coefficient

Gini coefficient
33.1

LI12: Dispersion around poverty threshold

	At-risk-poverty-rate			Sample size N			Distribution of total population		Distribution poor populat	
	Male	Female	Total	Male	Female	Total	Male	Female	Male	Fem
Below the ARPT 40% of median	6.6	7.7	7.1	1640	1978	3618	48.6	51.4	44.7	
Below the ARPT 50% of median	11.0	13.2	12.2	2772	3421	6193	48.6	51.4	44.1	
Below the ARPT 70% of median	24.7	28.9	26.8	6395	7773	14168	48.6	51.4	44.7	

1.2. Other indicator

1.2.1. Equivalised disposable income

D1. Mean equivalized income

CURRENCY	Mean equivalized income
National Currency	16821.69
Euro	16821.69

1.2.2. The unadjusted gender pay gap

The unadjusted gender pay gap is calculated only for those who work at least 15 hours per week in the main job.

P1. Unadjiusted gender pay gap

Hourly earning mean Male	Hourly earning mean Female	Gender Pay Gap
11.2368	10.2031	0.092

2. ACCURACY

2.1. Sampling design

2.1.1 Type of sampling (stratified, multi-stage, clustered)

Two stage sampling design: The first stage units (or primary sampling units PSU) are the municipalities, the second stage units (SSU) are the households.

The PSU are stratified according to their size in terms of number of residents. Stratification is carried out inside each administrative region. Four municipalities are selected in each strata.

Use of clustering:
Municipalities are clusters of households, households are clusters of individuals.

2.1.2 Sampling units (one stage, two stages)

Primary sampling units are the municipalities.
Secondary sampling units are the households selected from municipalities' registers with systematic sampling and not selected with PPS.

Sample size (number of SSU)	Number of PSU	Number of SSU (Total)	Avarage number of SSU for each PSU
<5	169	180	1.1
6-25	237	5143	21.7
26-50	430	12897	30.0
51-75	47	2704	57.5
76-100	11	964	87.6
101-200	11	1463	133.0
201-500	7	2324	332.0
>500	1	1111	1111.0
Total	913	26786	29.3

2.1.3 Stratification and sub-stratification criteria

Stratification of primary sampling units by the number of inhabitants so that the total number of inhabitants in each stratum is approximately constant (this guarantees self-weighting design in each region).
Municipalities which sizes are higher than a threshold are self-representing units i.e. are strata themselves and included with certainty in the sample of PSU.
Secondary sampling units are not stratified.

2.1.4 Sample size and allocation criteria

Sample size have been determined on the basis of expected deft reported in table 1 for macroregions (North, Centre, South). Data of ECHP for years 1995-1999, have been the basis for the evaluation of deff, results on income and poverty have been averaged over the 5 available years. National intra-classes correlation coefficient inside households, ρ_{SR}, and inside municipality, ρ_{NSR}, have been estimated on the basis of the above averages; then following formula to evaluate *deff* has been applied:

$$deff_r = \frac{n_r}{N_r^2}\left\{\frac{N_{r\,SR}^2}{n_{r\,SR}}\left(1+\rho_{SR}\left(\bar{b}_{r\,SR}-1\right)\right)+\frac{N_{r\,NSR}^2}{n_{r\,NSR}}\left(1+\rho_{NSR}\left(\bar{b}_{r\,NSR}-1\right)\right)\right\}$$

where n_r and N_r are sample and population dimension of administrative regions, $\bar{b}_{r\,SR}$ is the average household dimension and $\bar{b}_{r\,NSR}$ is the average number of individuals selected in each municipalities.

On the basis of survey on income of year 2003, the following response rates have been estimated:

- T(reg) for regions by municipality type (municipality type: metropolitan, over 50.000 residents and others);
- T(mr) for macro-regions by municipality type.

Then to smooth the estimates, T(c)=0.25*T(reg)+0.75* T(mr), has been applied to inflate the achivied sample size so that

n(sel)=n(ach) / T(c).

The sample inside macro-regions has been allocated by means of a generalized version (Falorsi et al, 1998 and Falorsi e Russo, 2003.) of Bethel methods (Bethel 1989), with iterative procedure that re-calculate at each step deff and sampling dimensions to satisfy given requirements.
Allocation inside regions averaging proportional and uniform allocation.

Table 1

Macroregions	Deft income	Deft poverty	Deff incombe	Deff poverty
1	2.64	1.59	6.97	2.54
2	2.26	1.43	5.09	2.05
3	2.69	1.61	7.24	2.61
Italy	**2.61**	**1.58**	**6.84**	**2.50**

Table 2

Macroregion	Households	Selected households	CV% income	CV% povertà rate
1	10,583,085	12,513	1.5	4.3
2	4,226,377	6,320	1.7	4.3
3	7,197,453	6,668	2.2	2.8
Italy	**22,006,915**	**25,501**	**1.1**	**2.1**

The sampling size of each rotational group is one/fourth of the above size.

2.1.5 Sample selection schemes

PSU are selected with probability proportional to their size (number of residents) by means of systematic sampling method by Madow (1949) inside each stratum.
Households are selected with equal probability by systematic sampling in each selected municipality from municipality-registers.

2.1.6 Sample distribution over the time

The sample is not distributed over time.

2.1.7 Renewal of sample: Rotational groups

Rotational design is used for households; the whole sample is composed of four rotational groups. Each group is included in the sample for four waves of the survey. Each year one fourth of the sample is renewed, replacing the group entered in the sample four years before.

	A	B	C	D	E	F	G	H	I
T	A4	B3	C2	D1					
T+1		B4	C3	D2	E1				
T+2			C4	D3	E2	F1			
T+3				D4	E3	F2	G1		
T+4					E4	F3	G2	H1	
T+5						F4	G3	H2	I1

Each group is associated to one municipality of the strata. The self-representative municipalities are enclosed in each of the rotational groups: in such case the households referring to these municipalities are divided in 4 independent samples.

2.1.8. Weightings

Weighting factors have been calculated taking into account the units' probability of selection, the non-response adjustment and the calibration to external data relating to the distribution of households and persons in the target population.

2.1.8.1 Design weight

Wave 1;

In case of the households at the first wave, the design weight of each household was given by the inverse of its inclusion probability and was calculated taking into account the population of the stratum, the population and the number of households in the extracted municipalities and the number of extracted households in the municipality.

Let p_{ji} be the design weight of the generic household j in the municipality i:

$$p_{ji} = \frac{1}{\pi_{hi}} = n_h \frac{P_h}{P_{hi}} \frac{M_{hi}}{m_{hi}}$$

where :

h is the stratum index;

i is the municipality index;

π_{hi} is the inclusion probability of the households resident in the municipality i of the stratum h;

n_h is the number of sample municipalities in the stratum h;

P_h is the population resident in the stratum h;

P_{hi} is the population in the municipality i of the stratum h;

M_{hi} is the number of households resident in the municipality i of the stratum h;

m_{hi} is the number of sample households in the municipality i of the stratum h.

Wave 2, 3, 4;

In case of the households at the second, third or fourth wave, an indirect sampling of households is done through the panel (of persons aged 14+ at the time of the panel selection). In this case, the inclusion probabilities cannot be calculated. Then, the solution consists of applying the Weight Share Method. Within a household, each member has been assign a weight coming from the final cross-sectional weight of the precedent year of survey, except for co-residents form whom the weight is =0. Average of these weights over all the household members (including co-residents) is assigned to each member (including co-residents).

2.1.8.2 Non-response adjustments

In the sample we observe two different non-response level: individual-level and household-level.

Concerning with the individual-level non-response, the records of the non-respondent individual belonging to respondent households were totally imputed.

Concerning with the non-response adjustment at the household level, the base weights were adjusted by a correction factor for total non-response worked out as the reciprocal of the response ratio for subgroups of households identified by the information we had on the extracted sample (for the households at wave 1) or gathered from the previous year of survey (for the households at wave 2, 3, 4). The groups are identified by segmentation obtained with interactive decision tree.

The re-calculated weight $\hat{p}_{j,k}$ for the generic household *j* in the sub-group k is:

$\hat{p}_{jk} = p_{jk} \frac{N_{Ek}}{N_{Ok}}$, where p_{jk} is the design weight, N_{Ek} is the number of households extracted in the sub-group *k*, and N_{Ok} is the number of respondent households.

Wave 1: the information used for the "new" households are:
territorial domain (NUTS II), demographic size of the municipalities, number of household components and nationality of the household head, type of income sources (gathered from fiscal data).

Wave 2, 3, 4: the information used for the "old" households are:
territorial domain (NUTS II), demographic size of the municipalities, number of household components, type of income sources, level of household income, nationality, sex, age, education and professional condition of the household components.

Even if for wave 2, 3 and 4 we have information on education and professional condition of the sample, in conformity with the previous year of survey a first stage of calibration procedure was adopted to assure the same structure as the population of the Labour Force Survey with regard to the education and professional position of the population. This is due to the fact that in Italy the non-response in an income survey is correlated with the position in the labour market (especially for self-employed) and with the education level of the respondents.

2.1.8.3 Adjustments to external data (level, variables used and sources)

After the non-response adjustments, the final weights were obtained applying a calibration of the household weights to external data sources (registers). Let X1, X2…Xp denote the external (known) variables

The calibration procedure consists of calculating the household weights ψ_j, such as:

- The calibrated weights are "not very different" from the weights $\hat{p}_j$
- The totals Xr of the calibration variables are exactly estimated by the same totals in the sample obtained with the weights ψ .

The external known totals are the following:

For each rotational sub-group:

1) Distribution of the population by sex and fourteen 5-year age groups at NUTS I level. The age groups are: 0-15, 16-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 + at the end of the income reference period (year t-1);
2) Distribution of households at NUTS II level at the time of the survey (year t)

For the entire sample:

1) Distribution of the population by sex and fourteen 5-year age groups at NUTS II level (year t-1)
2) Distribution of non-national population by sex and by UE and non UE distribution at NUTS I level (year t-1).
3) Distribution of the population by demographic size of the municipality at Nuts I level (year t-1).

2.1.8.4 Final cross-sectional weights

We applied an integrative calibration, that means that we used both household and personal variables in the procedure. The calibration is performed at household level using the household variables and the individual variables in their aggregate form as calibration variables. This technique ensures that members in the same household all receive the same weight.

2.1.9. Substitutions

In Italy no substitution of unit non-response has been applied.

2.2. Sampling errors

With reference to the survey - year 2005-, sampling errors were calculated for the common cross-sectional EU indicators based on the cross-sectional component of EU-SILC (at risk of poverty rate 60% (after social transfers), at risk of poverty rate 40% (after social transfers), at risk of poverty rate 50% (after social transfers), at risk of povety rate 70% (after social transfers), at risk of poverty rate 60% (before social transfers) without pensions, at risk of poverty rate 60% (before social transfers) with pensions, S80/S20, relative median at risk of poverty gap, Gini index) and for the unadjusted gender pay gap and for the equivalised disposable income.
In particular, sampling errors of the above indicators were estimated by the following steps:
1) linearization of the statistics of interest and derivation of a fictive variable for each of them (using SAS programs developed by EUROSTAT);
2) calculation of sampling variance using GENESEES software (software used at ISTAT to evaluate sampling errors).

2.2.1. Standard errors and effective sample size

The following table contains respectively the value, the absolute sampling error, the percentage relative sampling error, the effective sample size (sample respondent persons) for each of the above indicators.

Cross-sectional EU indicators- year 2005: sampling errors and effective sample size

	Value	Absolute sampling error	Relative sampling error %	Effective sample size (persons)
	(a)	(b)	(c)=(b)/(a)*100	(d)
At risk of pov. threshold	8633.33	48.13	0.56	56105
At risk of pov. rate 60% (after s.t.)	19.00	0.35	1.83	56105
At risk of pov. rate 40% (after s.t.)	7.10	0.22	3.15	56105
At risk of pov. rate 50% (after s.t.)	12.20	0.31	2.50	56105
At risk of pov. rate 70% (after s.t.)	26.80	0.31	1.17	56105
At risk of pov. rate 60% (before s.t.) without pensions	43.17	0.34	0.79	56105
At risk of pov. rate 60% (before s.t.) with pensions	23.59	0.34	1.44	56105
S80/S20	5.65	0.09	1.61	56105
Relative median at risk pov. gap	24.13	0.62	2.57	56105
Gini index	33.14	0.30	0.92	56105
Gender pay gap	9.20	0.93	10.11	15493
Equivalised disposable income	16821.70	99.25	0.59	56105

BREAKDOWNS				
	Value	**Absolute sampling error**	**Relative sampling error %**	**Effective sample size (persons)**
	(a)	**(b)**	**(c)=(b)/(a)*100**	**(d)**
At risk of pov. rate 60% (after s.t.)				
Age and Gender				
0-15	23.79	0.73	3.07	8794
16-24	22.87	0.80	3.50	5299
25-49	16.29	0.41	2.52	20521
50-64	14.54	0.47	3.23	10823
65 +	22.89	0.59	2.58	10668
16+	18.14	0.33	1.82	47311
16-64	16.75	0.38	2.27	36643
0-64	18.08	0.40	2.21	45437
Female 0-15	24.99	0.91	3.64	4208
Female 16-24	24.90	1.05	4.22	2641
Female 25-49	17.49	0.48	2.74	10413
Female 50-64	15.68	0.60	3.83	5547
Female 65+	25.75	0.69	2.68	6114
Female 16+	19.98	0.38	1.90	24715
Female 16-64	18.02	0.43	2.39	18601
Female 0-64	19.30	0.45	2.33	22809
Male 0-15	22.66	0.96	4.24	4586
Male 16-24	20.93	1.06	5.06	2658
Male 25-49	15.11	0.46	3.04	10108
Male 50-64	13.34	0.56	4.20	5276
Male 65+	18.91	0.73	3.86	4554
Male 16+	16.16	0.36	2.23	22596
Male 16-64	15.48	0.41	2.65	18042
Male 0-64	16.87	0.43	2.55	22628
Female	20.70	0.39	1.88	28923
Male	17.20	0.38	2.21	27182

	Value	Absolute sampling error	Relative sampling error %	Effective sample size (persons)
	(a)	(b)	(c)=(b)/(a)*100	(d)
Frequent activity status				
Frequent activity status and gender: total	18.04	0.41	2.26	46969
Total employed (at work)	8.90	0.26	2.93	20939
Total unemployed	43.97	1.42	3.22	2559
Total retired	16.20	0.52	3.22	9858
Total Other inactive	28.12	0.62	2.19	13613
Total not at work	25.47	0.48	1.87	26030
Frequent activity status and gender: females	19.99	0.46	2.28	24539
Females employed (at work)	6.20	0.31	5.00	8380
Females unemployed	39.15	1.73	4.42	1413
Females retired	17.12	0.66	3.87	4287
Females Other inactive	29.06	0.67	2.30	10459
Total females not at work	26.94	0.52	1.93	16159
Frequent activity status and gender: males	15.94	0.45	2.81	22430
Males employed (at work)	10.61	0.35	3.26	12559
Males unemployed	49.42	2.04	4.13	1146
Males retired	15.49	0.62	4.03	5571
Males Other inactive	24.97	1.03	4.13	3154
Total males not at work	23.00	0.62	2.71	9871

	Value	Absolute sampling error	Relative sampling error %	Effective sample size (persons)
	(a)	(b)	(c)=(b)/(a)*100	(d)
Household type				
Total no dependent children	16.12	0.35	2.17	28231
One person household, under 65 years	21.17	0.92	4.35	2659
One person household, 65 years and over	34.60	0.99	2.86	2867
One person household, male	18.90	0.89	4.71	2140
One person household, female	33.90	0.92	2.71	3386
One person household, total	27.89	0.69	2.47	5526
2 adults, no dependent children, both adults under 65 years	9.98	0.60	6.01	5174
2 adults, no dependent children, at least one adult 65 years or more	19.95	0.75	3.76	6510
Other households without dependent children	9.52	0.53	5.57	11021
Total dependent children	21.89	0.58	2.65	27874
Single parent household, one or more dependent children	34.81	2.16	6.21	1488
2 adults, one dependent child	15.48	0.84	5.43	7017
2 adults, two dependent children	21.54	0.90	4.18	9820
2 adults, three or more dependent children	34.80	2.38	6.84	2768
other households with dependent children	21.11	1.28	6.06	6781

	Value	Absolute sampling error	Relative sampling error %	Effective sample size (persons)
	(a)	(b)	(c)=(b)/(a)*100	(d)
Accomodation tenure status				
Owner or rent free	16.70	0.37	2.22	47128
tenant	29.33	1.04	3.55	8977

	Value	Absolute sampling error	Relative sampling error %	Effective sample size (persons)
	(a)	(b)	(c)=(b)/(a)*100	(d)
At risk of pov. rate 60% (before s.t.)				
without pension				
Age and gender				
Female 0-15	35.05	0.94	2.68	4208
Female 16-64	35.85	0.43	1.20	18601
Female 65+	85.71	0.56	0.65	6114
Female 16+	48.54	0.35	0.72	24715
Male 0-15	31.12	1.02	3.28	4586
Male 16-64	30.76	0.47	1.53	18042
Male 65 +	83.49	0.67	0.80	4554
Male 16+	41.16	0.41	1.00	22596
0-15	33.03	0.77	2.33	8794
16-64	33.31	0.39	1.17	36643
65+	84.78	0.48	0.57	10668
16+	44.99	0.33	0.73	47311
female	46.60	0.36	0.77	28923
male	39.55	0.41	1.04	27182

	Value	Absolute sampling error	Relative sampling error %	Effective sample size (persons)
	(a)	(b)	(c)=(b)/(a)*100	(d)
At risk of pov. rate 60%(before s.t.)				
with pension				
Age and gender				
Female 0-15	32.84	0.94	2.86	4208
Female 16-64	22.84	0.41	1.80	18601
Female 65+	27.75	0.68	2.45	6114
Female 16 +	24.09	0.35	1.45	24715
Male 0-15	29.41	1.01	3.43	4586
Male 16-64	19.99	0.45	2.25	18042
Male 65+	21.33	0.73	3.42	4554
Male 16 +	20.26	0.39	1.92	22596
0-15	31.08	0.77	2.48	8794
16-64	21.42	0.38	1.77	36643
65 +	25.06	0.59	2.35	10668
16+	22.25	0.32	1.44	47311
female	25.35	0.37	1.46	28923
male	21.73	0.40	1.84	27182

	Value	Absolute sampling error	Relative sampling error %	Effective sample size (persons)
	(a)	(b)	(c)=(b)/(a)*100	(d)
Relative median at risk pov. Gap				
Age and gender				
Female 16-64	27.95	0.78	2.79	3086
Female 65+	18.50	0.57	3.08	1508
Female 16+	22.72	0.56	2.46	4594
Male 16-64	27.36	0.96	3.51	2534
Male 65 +	16.11	0.81	5.03	884
Male 16+	24.02	0.78	3.25	3418
0-15	28.04	1.23	4.39	1833
16-64	27.51	0.73	2.65	5620
65 +	17.71	0.55	3.11	2392
16+	23.17	0.57	2.46	8012
female	23.67	0.63	2.66	5476
male	24.59	0.76	3.09	4369

2.3. Non-sampling errors

2.3.1. Sampling frame and coverage errors

The sampling frame is composed by the registers of the municipalities.

The sample was extracted in May 2004 and validated on June 2004, with the exception of the households belonging to the first rotational group, extracted in July 2005 and validated by September 2005.

The sampling frame is updated in continuous way by the municipalities in interactive modality.

2.3.2. Measurement and processing errors

2.3.2.1. Measurement errors

We consider that the following sources of measurement errors are likely to affect the collected data:

1. *respondents*: (i) memory effect, because information is collected according to respondents memories (official documentation about income is not required; external sources of information, as administrative registers, are used when available); (ii) omission, because respondents might not be willing to provide correct information about income or other living conditions; (iii) proxy effect, because in a few cases some individuals are allowed to provide information about other household members;

2. *interviewers*, who might provide the respondents with an incorrect interpretation of the questions, or might mistake when filling the questionnaire. Istat territorial offices are firstly trained and provided with training tools (e.g. instruction manuals, or presentations). Then, they are responsible for the interviewers training: they establish the timing and the duration of the training meetings, as well as provide support during the field work and control for the quality of the interviewers' work. Training strategies have been outlined also on the experience of pilot surveys;

3. *data entry* personnel, who might enter incorrect information, although some automatic controls are implemented in the registration software;

4. *questionnaire*. The final version of the questionnaire, as used in the survey 2005, is based on (i) the experience of three pilot surveys (carried out between 2002, and 2003) and the first 2004 SILC survey; (ii) the support of experts working in other research institutes; and (iii) a cognitive laboratory on self-employment. Information is collected through three main questionnaires: the first one collects information about each household member's demographic characteristics, and child care; the second one collects information at household level; the third one collects information at individual level (about individual aged 16 and over).

2.3.2.2. Processing errors

Description of data entry procedure

Data entry procedure is realised through a software application implemented using Blaise. The procedure contains automatic controls about: range of variable, main routes of questionnaire and any logical controls referred to internal inconsistence of collected information. Every control is set-up like "soft" in order to reduce typing errors.

Furthermore, the procedure provides for “hard” control in order to compare register and questionnaire information about household’s composition.

Coding controls
Coding controls are implemented in post-data-collection - process based on donor method.

Main errors detected in the post data collection process
Main errors detected are:
- Missing value.
- Value outside acceptance range.
- Incoherence value compared to other information in the same record.

2.3.3. Non-response errors

2.3.3.1. Achieved sample size

The following table shows the number of households for which the interview is accepted for the database and number of persons of 16 years or older who are members of the households for which the interview is accepted for the database, by rotational group.

Rotational Group (DB075)	Households (%)	Persons of 16 years or older (%)
1	6194 (28.11)	13289 (28.09)
2	5200 (23.60)	11147 (23.56)
3	5258 (23.87)	11392 (24.08)
4	5380 (24.42)	11483 (24.27)
Total	**22032 (100.00)**	**47311 (100.00)**

2.3.3.2. Unit non-response

For the Italian 2005 SILC survey the address contact rate (Ra), the proportion of completed household interviews accepted for the database (Rp), the household non-response rate (NRh), the proportion of complete personal interviews within the households accepted for the database (Rp), the individual non-response rates (*NRp*) and the overall individual non-response rates (*NRp_overall*) are shown below:

TYPE OF RATE	VALUE
RA	0.9913
RH	0.8592
NRH	14.832
RP	1
NRP	0.000
NRP_OVERALL	14.832

where:

NRh = (1-(Ra * Rh)) * 100

Where:

$$Ra = \frac{\text{Number of addresses successfully contacted}}{\text{Number of valid addresses selected}} = \frac{\sum[DB120 = 11]}{\sum[DB120 = all] - \sum[DB120 = 23]}$$

Ra is the address contact rate

$$Rh = \frac{\text{Number of household interviews completed and accepted for database}}{\text{Number of eligible households at contacted addresses}} = \frac{\sum[DB135 = 1]}{\sum[DB130 = all]}$$

Rh is the proportion of complete household interviews accepted for the database

DB120 is the record of contact at the address

DB130 is the household questionnaire result, and

DB135 is the household interview acceptance result.

NRp=(1-(Rp)) * 100

Where:

$$Rp = \frac{\text{Number of personal interviews completed}}{\text{Number of eligible individuals in the households whose interviews were completed and accepted for the database}} = \frac{\sum[RB250 = 11 + 12 + 13]}{\sum[RB245 = 1 + 2 + 3]}$$

Rp is the proportion of complete personal interviews within the households accepted for the database

RB245 is the respondent status, and

RB250 is the data status.

Overall individual non-response rates (*NRp_overall*) has been computed as follows:
NRp_overall = (1-(Ra * Rh * Rp)) * 100

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

Frequency Percent Row Pct Col Pct **Rotational Group (DB075)**	**DB120**					**DB130**						**DB135**
	11	21	22	23	Total	11	21	22	23	24	Total	1
1	7498	59	28	423	8008	6194	686	337	82	199	7498	6194
	27.99	0.22	0.1	1.58	29.9	24.15	2.68	1.31	0.32	0.78	29.24	28.11
	93.63	0.74	0.35	5.28		82.61	9.15	4.49	1.09	2.65		
	29.24	42.1	32.9	46.1		28.11	34.6	35.4	35.2	44.9		
2	5977	29	21	152	6179	5200	430	209	60	78	5977	5200
	22.31	0.11	0.08	0.57	23.07	20.28	1.68	0.82	0.23	0.3	23.31	23.6
	96.73	0.47	0.34	2.46		87	7.19	3.5	1	1.31		
	23.31	20.7	24.7	16.6		23.6	21.7	22	25.8	17.6		
3	5977	24	13	171	6185	5258	392	198	40	89	5977	5258
	22.31	0.09	0.05	0.64	23.09	20.5	1.53	0.77	0.16	0.35	23.31	23.87
	96.64	0.39	0.21	2.76		87.97	6.56	3.31	0.67	1.49		
	23.31	17.1	15.3	18.7		23.87	19.8	20.8	17.2	20.1		
4	6192	28	23	171	6414	5380	477	207	51	77	6192	5380
	23.12	0.1	0.09	0.64	23.95	20.98	1.86	0.81	0.2	0.3	24.15	24.42
	96.54	0.44	0.36	2.67		86.89	7.7	3.34	0.82	1.24		
	24.15	20	27.1	18.7		24.42	24	21.8	21.9	17.4		
Total	25644	140	85	917	26786	22032	1985	951	233	443	25644	22032
	95.74	0.52	0.32	3.42	100	85.91	7.74	3.71	0.91	1.73	100	100

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

In Italy the substitution of non-respondents units is not applied.

2.3.3.5. Item non-response

Table 1. Distribution of item non-response

Item non-response	(A) % of households having received an amount	(B) % of households with missing values (before imputation)	(C) % of households with partial information (before imputation)
Total disposable household incombe	99.66	0.74	48.00
Total disposable household income before social transfers other than old-age and survivors' benefits	99.36	0.88	46.23

Total disposable household income including old-age and survivors' benefits	93.80	1.92	43.50
Net income components at household level			
Income from rentals of properties or lands			
Family/children related allowances	7.14	0.55	0.11
Social exclusion	27.59	1.45	0.54
Housing allowances	0.96	0.16	0.00
Transfers received	1.74	0.45	0.01
Interest. dividends. Profits	4.48	0.46	0.06
Interest repayments on mortgage	49.16	11.22	2.02
Income of people aged less than 16	11.32	10.76	0.00
Regular taxes on wealth	0.77	0.15	0.07
Transfers paid	67.18	2.56	1.31
Repayments/receipts for tax adjustment	4.21	0.33	0.01

	% of persons 16 + having received an amount	% of persons with missing values (before imputation)	% of persons with partial information (before imputation)
Net income components at personal level			
Employee cash or near-cash income	39.55	1.62	13.44
Non cash employee incombe	0.99	0.00	0.00
Contributions to individual private pension plan	7.46	0.95	0.00
Cash benefit or losses from self-employment	17.83	3.94	0.05
Pension from individual private plans	0.17	0.03	0.00
Unemployment benefits	8.67	0.27	0.09
Old-age benefits	28.52	1.12	0.05
Survivor' benefits	1.73	0.06	0.00
Disability benefits	3.39	0.27	0.00
Education related allowances	0.60	0.07	0.00
Gross monthly earnings of employees	32.90	5.46	0.00

2.3.3.6 The total item non-response for equivalised disposable income is 0.74 per cent (number of observations is 163) and the total number of observations is 22032 (unit=households). For unadjusted gender pay gap the total item non-response is 5.46 per cent (number of observations is 2581) and the total number of observations is 47305 (unit=individuals 16 +).

2.4. Mode of data collection

The distribution of individuals aged 16 and over by data status (RB250) and by type of interview (RB260) is shown below. As the non-respondent individuals belonging to interviewed households have been completely imputed with donor method. the distribution of individual by data status is that of the achieved sample size of individuals aged 16 and over. reported in § 2.3.3.1.

Frequency Percent Row Pct Col Pct Rotational Group (**DB075**)	**RB250** 11	**RB260** Face to face interview-PAPI	Proxy interview	Missing	Total
1	13289	11103	1947	239	13289
	28.09	23.47	4.12	0.51	28.09
		83.55	14.65	1.8	
		28.32	25.91	40.1	
2	11147	9258	1776	113	11147
	23.56	19.57	3.75	0.24	23.56
		83.05	15.93	1.01	
		23.62	23.63	18.96	
3	11392	9392	1875	125	11392
	24.08	19.85	3.96	0.26	24.08
		82.44	16.46	1.1	
		23.96	24.95	20.97	
4	11483	9447	1917	119	11483
	24.27	19.97	4.05	0.25	24.27
		82.27	16.69	1.04	
		24.1	25.51	19.97	
Total	47311	39200	7515	596	47311
	100	82.86	15.88	1.26	100

2.5. Interview duration

The mean household interview duration. calculated as prescribed. amounts to 68 minutes.

3. COMPARABILITY

3.1. Basic concepts and definitions

The national concepts used. **the differences between the national concepts and standard EU-SILC concepts**. and an assessment. **if available**. of the consequences of the differences mentioned.

– The reference population: same definition as standard EU-SILC;

– the private household definition: in accordance with the Commission Regulation (EC) N° 1980/2003 (Annex I. paragraph 1.1). that allow to the Member States for using the common household definition defined in their own national statistical system. in EU-SILC Italy uses the following Italian household definition*: **"cohabitants related through marriage. kinship. affinity. adoption. patronage and affection"***;

– the household membership: the Italian EU-SILC does not include live-in domestic personnel. au pairs. Concerning these persons. only some socio-demographic information are collected (date of birth. sex. marital status. duration of stay in the household). The number of these persons included in the sample was 35 (0.1% with respect to the total number of households and 0.06% w.r.t. interviewed individuals).

– the income reference period(s) used: same definition as standard EU-SILC;

— the period for taxes on income and social insurance contributions: *no income taxes and social security contributions at source available in the Italian EU-SILC before 2007*;

— the reference period for taxes on wealth: same definition as standard EU-SILC;

– the lag between the income reference period and current variables: *in the Italian EU-SILC 2004 current period is about 10 months after the end of the income reference period;*

– the total duration of the data collection of the sample: *2 months. starting from the transmission of questionnaires to interviewers until their return back.*

— basic information on activity status during the income reference period: same to the standard EU-SILC concept;

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 will be reported for the following target variables:

— total household gross income: same definition as standard EU-SILC;

— total disposable household income: same definition as standard EU-SILC;

— total disposable household income. before social transfers other than old-age and survivors' benefits: same definition as standard EU-SILC;

— total disposable household income. before social transfers including old-age and survivors' benefits: same definition as standard EU-SILC;

— imputed rent: *not available before 2007*;

— income from rental of property or land: same definition as standard EU-SILC;

— family/children-related allowances: same definition as standard EU-SILC;

- social exclusion payments not elsewhere classified: same definition as standard EU-SILC;

— housing allowances: same definition as standard EU-SILC;

— regular inter-household cash transfers received: same definition as standard EU-SILC;

— interest. dividends. profit from capital investments in unincorporated businesses: same definition as standard EU-SILC;

— interest paid on mortgages: *not available before 2007*;

— income received by people aged under 16: same definition as standard EU-SILC;

— regular taxes on wealth: same definition as standard EU-SILC;

— regular inter-household transfers paid: same definition as standard EU-SILC;

— tax on income and social insurance contributions: *not available before 2007*;

— repayments/receipts for tax adjustments: *repayments/receipts for tax adjustments are those paid in the n+1 year. where n is the income reference period. This is consistent with the (optional) definition of taxes as 'taxes due on the incomes of the reference period'. An accurate assessment of the differences between the two tax concepts will be feasible after 2008. when it is possible to compare the total taxes due on the incomes of the reference period with the total taxes paid during the same period for the individuals included in the first two-year panel.*

— cash or near-cash employee income: same definition as standard EU-SILC;

— non-cash employee income: *the value of the company car for personal use is the user's cost estimated by the ACI (Automobile Club Italiano)*;

— employers' social insurance contributions: *not available*;

— cash profits or losses from self-employment (including royalties): *the standard procedure requires to collect the amount of money drawn out of self-employment activity only when the profit/loss resulting from accounting books or the taxable self-employment income (net of corresponding taxes) are not available. For the Italian EU-SILC. both administrative and survey micro-data are available. through an exact matching of tax and sample records. The income from self-employment is set equal to the maximum value between: (i) the (net) self-employment income resulting from the Tax Report and (ii) the (net) self-employment income reported by the interviewee. In the questionnaire. the self-employment income question is preceded by a 'reminder question' that provides a YES/NO list of the possible personal uses of earnings (consumption and saving). This departure from the standard definition is adopted in order to minimise either tax avoidance in the administrative data or under-reporting in the survey data. depending on which of the two is greater. With respect to the standard one. the procedure adopted for the Italian EU-SILC leads to more comparable data. under the assumption that other countries' self-employment incomes are not underestimated*;

— value of goods produced for own consumption: *not available before 2007*;

— unemployment benefits: same definition as standard EU-SILC;

— old-age benefits: same definition as standard EU-SILC;

– survivors' benefits: same definition as standard EU-SILC;

– sickness benefits. *paid sickness leaves of employees are included in the dependent employment incomes; the same holds true for self-employed*;

— disability benefits: same definition as standard EU-SILC;

— education-related allowances: same definition as standard EU-SILC;

— gross monthly earnings for employees: same definition as standard EU-SILC;

3.2.2. The source or procedure used for the collection of income variables *Paper and pencil interviews (PAPI) for all income variables. including the money drawn out of business by the self-employeds. Administrative data have been linked to sample data and used for checking pensions and self-employment incomes.*

3.2.3. The form in which income variables at component level have been obtained (e.g. gross. net of taxes on income at source and social contributions. net of tax on income at source. net of social contributions)*: all income variables at component level are net of taxes and social security contribution at source*;

3.2.4. The method used for obtaining income target variables in the required form (i.e. as gross values): *gross values not available before 2007*;

4. COHERENCE

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

In this section we present the main results of the comparison between EU-SILC data and external data sources for the principal income target variables. In particular, we focus on the following net income components: 1) Employee cash or near cash income (PY010N); 3) A variable computed as the sum of Old-age benefits (PY100N), Survival benefits (PY110N) and Disability benefits (PY130N). Data from National Accounts and Labour Force Survey by Istat, Fiscal Agencies of the Ministry of the Economy and Pensions Register by INPS (National Institute for Social Security) are used as external benchmarks. The table 1 shows that the EU-SILC 2005 estimate of the net employee cash or near income is 3% over the Italian National Accounts value. Table 2 shows the coherence of EU-SILC 2005 estimate with the ones of Fiscal Agencies for the number of people who earn employee cash or near income. Differences in applied definitions – i.e. domestic vs resident employment – can well explain the gap in estimates.

Table 1

PY010N	millions of euro – 2004	
Economic components:	National Accounts* and Fiscal Agencies**	Eu-Silc_05
PY010G Gross employee cash or near income* (+)	401.219	-
Social contribution* (-)	35.751	-
Tax on employee cash or near income** (-)	67.468	-
Net employee cash or near income	298.000	307.429

Table 2

Number of people who receive employee cash or near cash income	Thousands of units – 2004	
	Fiscal Agencies**	Eu-Silc_05
	20.424	19.824

Due to the different definitions, National Accounts are not directly comparable with EU-SILC estimates on self-employment incomes. In table 3 are compared the EU-SILC 2005 estimate of number of self-employment incomes earners with the self-employed of other sources . Notice that in LFS a worker is classified as an independent on the basis of his/her main activity. With respect to NA, the estimate of self-employed units in term of full time equalised workers are presented. The EU-SILC estimate is referred to the number of people whose earnings from self-employment may have been temporary and/or from a secondary working activity.

Table 3

	Thousands of units – 2004		
Number of people who receive self-employment income	National Accounts (ula*)	Labour force survey estimate Istat	Eu-Silc_05
	7.306	6.287	8.351

(*) Full time equivalent unit of workers

Finally, in tables 4 and 5 are reported data on social expenditure and beneficiaries for three kind of functions put all together: old-age, survival and disability. In both cases, EU-SILC 2005 estimates are quite close to other sources' ones.

Table 4

PY100N-PY110N-Y130N Millions of euro - 2004

Economic Components:	National Account* and Fiscal Agencies**	Eu-Silc_05
PY100G-PY110G-PY130G (+)	207.679	-
Tax on Old-age-Survival-disability benefits (-)	26.470	-
PY100N-PY110N-PY130N	181.209	177.426

Table 5

	Thousands – 2004	
Number of beneficiaries of Old-age-Survival-disability benefits	Pension Register of INPS (excluded persons aged under 15 and/or residing abroad)	Eu-Silc_05
	15.700	15.570