



**CYPRUS**

**FINAL QUALITY REPORT**

**STATISTICS ON INCOME AND LIVING CONDITIONS  
2006**

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## **PREFACE**

The present quality report complies with the Commission Regulation (EC) No 1177/2003 Article 16. The structure of the report follows Commission Regulation No 28/2004 and presents results on accuracy, comparability and coherence of the EU-SILC survey 2006. The common longitudinal EU indicators based on the longitudinal component of EU-SILC cannot be computed since this is the 2<sup>nd</sup> wave and they will be given after the completion of 4 waves.

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

### **1.1. Common longitudinal EU indicators based on the longitudinal component of EU-SILC**

The common longitudinal EU indicators based on the longitudinal component of EU-SILC cannot be computed since this is the 2<sup>nd</sup> wave and they will be given after the completion of 4 waves.

### **1.2. Other indicators**

Not applicable at this stage.

## **2. ACCURACY**

### **2.1. Sample design**

#### **2.1.1. Type of sample design (stratified, multi-stage, clustered)**

The sample was drawn from the 2001 Census of Population sampling frame which was updated by the Electricity Authority of Cyprus (E.A.C.) list of new domestic consumers (between 2002 and 2005). The sample design was one-stage stratification.

#### **2.1.2. Sampling units (one stage, two stages)**

The sampling units are private households which were selected with simple random sampling within each stratum.

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

Geographical stratification criteria were used for the sample selection. The households were stratified in 9 strata based on District (Urban / Rural), i.e. 1) Lefkosia Urban, 2) Lefkosia Rural, 3) Ammochostos Rural<sup>(1)</sup>, 4) Larnaka Urban, 5) Larnaka Rural, 6) Lemesos Urban, 7) Lemesos Rural, 8) Pafos Urban, 9) Pafos Rural.

#### **2.1.4. Sample size and allocation criteria**

According to the Regulation (EC) No 1177/2003 Article 9, the minimum effective sample size for Cyprus is 3250 households and 7500 persons aged 16 or over. As the sample is based on a rotational design of 4 replications with a rotation of one replication per year, the selection of one new sub-sample was required. More specifically for 2006 one sub-sample of 2005 survey was dropped (R1), and a new sub-sample (R5) was separately selected in the same manner as in 2005,

so as to represent the whole population. Due to the non-response of 2005 survey and the number of non existent or not successfully contacted addresses, the initial sample of 2006 survey was 3963 households. The status of our sample for the 2006 round in each rotational group is as follows:

	Total	R1	R2	R3	R4	R5
Status of sample	3.963	979	937	921	952	1153

The allocation of the sample in the 9 strata is shown in the table below:

**Table 2.1.4.1 : Population and sample distribution**

DISTRICT	N			n		
	NO. OF HOUSEHOLDS - CENSUS & EAC			DISTRIBUTION OF THE SAMPLE		
	TOTAL	URBAN	RURAL	TOTAL	URBAN	RURAL
<b>TOTAL</b>	<b>250.538</b>	<b>172.276</b>	<b>78.262</b>	<b>3.963</b>	<b>2.703</b>	<b>1.260</b>
<b>LEFKOSIA</b>	<b>98.959</b>	74.796	24.163	<b>1.546</b>	1.163	383
<b>AMMOCHOSTOS</b>	<b>13.406</b>	0	13.406	<b>208</b>	0	208
<b>LARNAKA</b>	<b>40.368</b>	25.048	15.320	<b>676</b>	410	266
<b>LEMESOS</b>	<b>69.433</b>	54.888	14.545	<b>1.124</b>	878	246
<b>PAFOS</b>	<b>28.372</b>	17.544	10.828	<b>409</b>	252	157

For the data collection 20 interviewers were appointed, 8 in Lefkosia district, 4 in Larnaka/ Ammochostos, 6 in Lemesos and 2 in Pafos. The sampled households were grouped as much as possible in small areas so as to minimise travelling expenses. Each interviewer had to visit on average 15 households per week.

<sup>(1)</sup> Ammochostos Urban is an area not under the effective control of the Government of the Republic of Cyprus.

The 2006 sample results are shown in the table below:

**Table 2.1.4.2 : Sample size**

<b>Addresses in initial sample</b>	<b>3.963</b>
Addresses used for the survey	3.836
Addresses out of scope	127
<b>Addresses used</b>	<b>3.836</b>
Addresses successfully contacted	3.824
Addresses not successfully contacted	12
<b>Addresses successfully contacted</b>	<b>3.824</b>
Household questionnaire completed	3.621
Refusal to cooperate	148
Entire household away for the duration of fieldwork	11
Household unable to respond	30
Other reasons for not completing the Household questionnaire	14
<b>Household questionnaire completed</b>	<b>3.621</b>
Interviews accepted for database	3.621
Interviews rejected for database	0

The 127 addresses which were out of scope of the survey correspond to vacant accommodation, or buildings used as secondary residences or for business purposes, or demolished housing units. Furthermore 12 addresses were not successfully contacted. Out of the 3.824 addresses successfully contacted, 3.621 households completed the Household questionnaire and were all accepted for the database. Thus, the achieved sample size was 3.621 households, 11.069 persons in total and 8.757 persons aged 16 or over.

### **2.1.5. Sample selection schemes**

The sample was selected from each stratum with simple random sampling.



### 2.1.6. Sample distribution over time

Table 2.1.6.1 that follows gives an overview of the cumulative sample development during the fieldwork period from the 13<sup>th</sup> of March 2006 to 14<sup>th</sup> of July 2006.

**Table 2.1.6.1 : Sample distribution over time**

Period	Addresses in initial sample	Addresses out of scope	Addresses used	Addresses not successfully contacted	Non-response	Household Questionnaire Completed
13/03 – 31/03	693	7	686	0	22	664
13/03 - 15/04	1.179	26	1.153	2	39	1.112
13/03 – 30/04	1.448	37	1.411	3	54	1.354
13/03 – 15/05	2.023	56	1.967	6	70	1.891
13/03 – 31/05	2.642	75	2.567	8	93	2.466
13/03 – 15/06	3.176	91	3.075	11	127	2.947
13/03 – 30/06	3.685	107	3.568	12	171	3.395
13/03 – 14/07	3.963	127	3.826	12	203	3.621

### 2.1.7. Renewal of sample: rotational groups

The sample in the first round was divided in 4 sub-samples as it was based on a rotational design of 4 replications with a rotation of one replication per year. Each sub-sample was separately selected so as to represent the whole population. Every year one sub-sample is going to be dropped and substituted by a new one. Thus for 2006 one specific sub-sample, pre-selected from 2005 (R1), was dropped and substituted by a new one (R5). The new sub-sample was also separately selected, so as to represent the whole population.

The size of each Rotational Group for the 2006 survey is shown in Table 2.1.7.1:

**Table 2.1.7.1: Size of the Rotational Groups**

	Total	R5	R2	R3	R4
Addresses in initial sample	3.963	1.153	937	921	952
Household Questionnaire completed	3.621	940	897	876	908
Interviews Accepted for database	3.621	940	897	876	908

## 2.1.8. Weightings

### 2.1.8.1. Design factor

The methodology that was used for the computation of the weights of the survey is the one proposed in Doc. EU-SILC 065/05. For a household in panel 5 (R5) – panel 5 replaced panel 1 of the first wave - the design weight is the inverse of its inclusion probability that is the probability belonging to the selected sample of households:

$$DB080_i = \frac{1}{\pi_i} = \frac{1}{\frac{n_i}{4N_i}} = \frac{4N_i}{n_i}, \quad i=1,\dots,9$$

$\pi_i$  = the probability of a household to be selected from stratum i

$n_i$  = the sample size of stratum i

$N_i$  = the total number of households in the sampling frame of stratum i

For households in panels 2, 3 and 4 the household design weights were calculated by following the methodology proposed by Eurostat in Doc. 065/05. The general steps followed were:

- Computation of panel person base weights
- Correction for non response due to attrition
- Computation of base weights for persons entering panel households for the first time, i.e. newborns of sample women, persons moving into sample households from other non-sample households
- Computation of household weights by averaging within household over all household members

### 2.1.8.2. Non-response adjustments (for panel 5)

The aim of non-response adjustments is to reduce the bias due to non-response, i.e. household was contacted (DB120=11) but household questionnaire was not completed (DB130≠11). The empirical response rate within each stratum provides an estimate of the response probability for all the households of the stratum. The weight of a household after correction for the non-response at the household level is:

$$DB080_i * \frac{1}{\hat{p}_i}$$

$DB080_i$  = the design weight of a household in stratum i before non-response adjustment

$\hat{p}_i$  = the estimated response probability of the household in stratum i

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

The next step is to combine the entire sample (panels 2 – 5) and apply the calibration procedure. The target of the calibration procedure is to improve the accuracy of the estimated household and personal weights by using external known information. Eurostat recommends an “*integrative*” calibration. The idea is to use calibration variables defined at both household and individual level. The individual variables are aggregated at the household level by calculating household totals such as the number of male/female in the household, the number of persons aged 16 and over etc. After that, calibration is done at the household level using the household variables and the individual variables in their aggregate form.

The calibration variables used at household level were the household size (household size=1, household size=2, household size=3, household size $\geq$ 4) and the tenure status (tenure status=1 (i.e. owned or provided free), tenure status =2 (i.e. rented)). At personal level the calibration variables used were the distribution of population by age (age $\leq$ 15, 16 $\leq$ age $\leq$ 19, 20 $\leq$ age $\leq$ 24, ..., 70 $\leq$ age $\leq$ 74, age $\geq$ 75) and gender.

Based on this calibration procedure and using the weight after non-response adjustment as the initial weight, the household (DB090) and the personal (RB050) cross-sectional weights were calculated.

Calibration procedures were further used for the calculation of cross-sectional weights for household members aged 16 and over (PB040) and for the children aged 0 to 12 years (inclusive) (RL070). For both PB040 and RL070 the personal cross-sectional weight RB050 was used as the initial weight. The calibration variables used for the cross-sectional weight of household members aged 16 and over were the distribution of population aged 16 and over by age (five years age groups) and gender. The respective calibration variable for the children cross-sectional weight for childcare (RL070) was the distribution of population aged 0 to 12 by single years of age.

### **2.1.8.4. Final longitudinal weight**

The initial longitudinal weights DB090 and RB050 were calculated in the same way as was used in the case of the cross-sectional weights. Thus, the final cross-sectional weights of each household or person were values of integrated weights divided by 4. The final longitudinal weights of households or persons were values of integrated weights divided by 3.

### **2.1.8.5. Non-response adjustments (for panel 5)**

See point 2.1.8.2.

#### **2.1.8.6. Adjustments to external data (level, variables used and sources)**

See point 2.1.8.3.

#### **2.1.8.7. Final longitudinal weight**

See point 2.1.8.4.

#### **2.1.8.8. Final household cross-sectional weight**

The final cross-sectional weights were calculated as described above, i.e. using DB080 after non-response adjustment as the initial weight for panel 5 and base weights adjusted for non-response due to attrition for panels 2 – 4. The calibration methods were then applied on the total sample.

#### **2.1.9. Substitutions**

No substitution procedures were applied.

##### **2.1.9.1. Method of selection of substitutes**

Not applicable.

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

Not applicable.

##### **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**

Not applicable.

### **2.2. Sampling errors**

#### **2.2.1. Standard error and effective sample size**

The sampling frame is divided into 4 Urban areas and 5 Rural areas in Cyprus. These 9 geographic areas are regarded as strata and independent sample of households is selected from each stratum.

Let  $h$  denote the stratum  $h=1, 2, 3, 4, 5, 6, 7, 8, 9$

Let  $i$  denote the selected household

Let  $k$  denote the member of the household

Suppose the total of a variable of interest is  $T$ . Then our estimate is

$$\hat{T} = \sum_{h=1}^9 \sum_i \sum_k w_{hik} t_{hik} \quad (1)$$

Where  $\hat{T}$  is the estimate of  $T$

$w_{hik}$  is the weight of the  $k^{\text{th}}$  member of household  $i$  in the  $h^{\text{th}}$  stratum

$t_{hik}$  is the value of the variable of interest of  $k^{\text{th}}$  member in household  $i$  in the  $h^{\text{th}}$  stratum

### Variance estimation

The objective is to estimate or approximate precision of the estimator under consideration.

Suppose the total of a variable of interest is  $T$  and our estimate  $\hat{T}$  is defined by (1).

We are to estimate  $V = \text{Var}(\hat{T})$  or the coefficient of variation  $\sqrt{V}/T$ . Since the latter is obviously estimated by  $\sqrt{\hat{V}}/\hat{T}$ , we focus on  $\hat{V}$ . Since the sample is stratified, the variance can be separately estimated in strata:

$$\hat{V} = \sum_{h=1}^9 \hat{V}_h \quad (2)$$

Now we proceed to estimation of the variances  $\hat{V}_h$  in strata.

The estimator of the **Total** is 
$$\hat{T}_h = \sum_i \sum_k w_{hik} t_{hik} .$$

The following estimator gives the variance of a simple random sample for the latter:

$$\hat{V}_h(\hat{T}_h) = \frac{n_h(1-f_h)}{n_h-1} \sum_{i=1}^{n_h} (t_{hi\bullet} - \bar{t}_{h\bullet\bullet})^2, \quad (3)$$

where  $t_{hi\bullet} = \sum_k w_{hik} t_{hik}$ ,

$$\bar{t}_{h\bullet\bullet} = \left( \sum_i t_{hi\bullet} \right) / n_h, \quad h=1, 2, 3, 4, 5, 6, 7, 8, 9$$

and  $f_h = n_h / N_h$

Suppose the **Mean** of a variable of interest  $y$  is  $\bar{Y}$ . Then the estimator  $\hat{Y}_h$  for stratum  $h$  is:

$$\hat{Y}_h = \left( \sum_i \sum_k w_{hik} y_{hik} \right) / \left( \sum_i \sum_k w_{hik} \right)$$

and the variance of  $\hat{Y}_h$  is:

$$\hat{V}_h(\hat{Y}_h) = \frac{n_h(1-f_h)}{n_h-1} \sum_{i=1}^{n_h} (y_{hi\bullet} - \bar{y}_{h\bullet\bullet})^2$$

Where  $y_{hi\bullet} = \left( \sum_k w_{hik} (y_{hik} - \hat{Y}_h) \right) / \left( \sum_i \sum_k w_{hik} \right)$

$$\bar{y}_{h\bullet\bullet} = \left( \sum_i y_{hi\bullet} \right) / n_h$$

**Table 2.2.1.1: Mean (weighted), the total number of observations (before and after imputation) and Standard errors for the longitudinal Income components**

Income Components at household level	EU-SILC 2005			
	Mean	Number of observations		Standard error
		Before imputation	After imputation	
Total household gross income (HY010)	18.055,7	2.691	2.766	309,0
Total disposable household income (HY020)	16.170,8	2.765	2.766	259,0
Total disposable household income before social transfers other than old-age and survivors' benefits (HY022)	15.331,0	2.739	2.740	242,4
Total disposable household income before social transfers including old-age and survivors' benefits (HY023)	15.795,8	2.477	2.478	274,4
Gross income from rental of a property or land (HY040G)	4.385,7	224	224	438,3
Family/children related allowances (HY050G)	647,7	1.525	1.525	20,6
Social exclusion not elsewhere classified (HY060G)	2.424,8	77	77	220,7
Housing allowances (HY070G)	2.472,2	83	83	347,4
Regular inter-household cash transfer received (HY080G)	2.386,4	200	200	217,1
Interest, dividends, profit from capital investment in unincorporated business (HY090G)	3.337,9	190	190	629,4
Income received by people aged under 16 (HY110G)	1.229,6	4	4	886,0
Regular taxes on wealth (HY120G)	48,0	1.671	1.671	2,8
Regular inter household cash transfer paid (HY130G)	2192,6	295	295	156,2
Tax on income and social insurance contributions (HY140G)	2.191,8	1.999	2.040	70,5

**Table 2.2.1.1 (ctd.): Mean (weighted), the total number of observations (before and after imputation) and Standard errors for the longitudinal Income components**

Income Components at personal level	EU-SILC 2005			
	Mean	Number of observations		Standard error
		Before imputation	After imputation	
Employee cash or near cash income (PY010G)	9.696,2	3.262	3.350	172,8
Non-cash employee income (PY020G)	1.649,2	54	54	170,4
Cash benefits or losses from self-employment (PY050G)	10.369,0	606	614	442,1
Pension from individual private plans (PY080G)	3.366,2	16	16	483,3
Unemployment benefits (PY090G)	2.263,1	236	236	835,6
Old-age benefits (PY100G)	4.911,7	1.277	1.277	154,7
Survivor benefits (PY110G)	3.994,2	62	62	311,9
Sickness benefits (PY120G)	920,1	73	73	118,0
Disability benefits (PY130G)	3.346,5	105	105	193,8
Education-related allowances (PY140G)	1.446,4	330	330	42,6

**Table 2.2.1.2 : Mean (weighted), the total number of observations (before and after imputation) and Standard errors for the longitudinal Equivalised disposable income**

Equivalised disposable income	EU-SILC 2005			
	Mean	Number of observations		Standard error
		Before imputation	After imputation	
<b>Subclasses by household size</b>				
1 household member	6.934,9	402	402	340,1
2 household members	8.286,5	1.632	1.632	249,9
3 household members	9.170,9	1.350	1.350	130,8
4 and more	8.780,5	5.118	5.122	75,7
<b>Population by age group</b>				
< 25	8.480,4	3.057	3.059	88,4
25 to 34	9.798,1	1.063	1.063	297,8
35 to 44	8.622,1	1.215	1.216	131,2
45 to 54	9.734,5	1.170	1.171	209,6
55 to 64	9.448,9	908	908	245,9
65+	5.960,3	1.089	1.089	136,5
<b>Population by sex</b>				
Male	8.711,1	4.185	4.188	99,0
Female	8.602,3	4.317	4.318	102,3



**Table 2.2.1.3: Mean (weighted), the total number of observations (before and after imputation) and Standard errors for the longitudinal Income components**

Income Components at household level	EU-SILC 2006			
	Mean	Number of observations		
		Before imputation	After imputation	
Total household gross income (HY010)	19.769,1	2.641	2.680	340,6
Total disposable household income (HY020)	17.712,1	2.680	2.680	286,1
Total disposable household income before social transfers other than old-age and survivors' benefits (HY022)	16.591,2	2.665	2.665	278,7
Total disposable household income before social transfers including old-age and survivors' benefits (HY023)	14.260,1	2.430	2.430	292,4
Gross income from rental of a property or land (HY040G)	379,9	233	233	45,8
Family/children related allowances (HY050G)	381,2	1.904	1.904	13,6
Social exclusion not elsewhere classified (HY060G)	30,8	32	32	5,9
Housing allowances (HY070G)	98,9	82	82	16,9
Regular inter-household cash transfer received (HY080G)	222,4	224	224	25,2
Interest, dividends, profit from capital investment in unincorporated business (HY090G)	362,3	280	280	90,2
Income received by people aged under 16 (HY110G)	0,9	3	3	0,6
Regular taxes on wealth (HY120G)	27,5	1.548	1.548	1,6
Regular inter household cash transfer paid (HY130G)	262,2	354	354	19,3
Tax on income and social insurance contributions (HY140G)	1.767,4	1.993	2.020	60,9

**Table 2.2.1.3 (ctd.): Mean (weighted), the total number of observations (before and after imputation) and Standard errors for the longitudinal Income components**

Income Components at personal level	EU-SILC 2006			
	Mean	Number of observations		Standard error
		Before imputation	After imputation	
Employee cash or near cash income (PY010G)	10.294,7	3.339	3.381	190,0
Non-cash employee income (PY020G)	1.487,7	77	77	154,6
Cash benefits or losses from self-employment (PY050G)	9.372,2	677	679	450,2
Pension from individual private plans (PY080G)	4.272,9	15	15	634,8
Unemployment benefits (PY090G)	2.478,2	245	245	564,3
Old-age benefits (PY100G)	5.330,4	1.265	1.265	157,3
Survivor benefits (PY110G)	3.864,4	60	60	329,3
Sickness benefits (PY120G)	724,9	67	67	94,3
Disability benefits (PY130G)	3.770,5	132	132	177,6
Education-related allowances (PY140G)	1.603,9	311	311	71,2

**Table 2.2.1.4 : Mean (weighted), the total number of observations (before and after imputation) and Standard errors for the longitudinal Equivalised disposable income**

Equivalised disposable income	EU-SILC 2006			
	Mean	Number of observations		Standard error
		Before imputation	After imputation	
<b>Subclasses by household size</b>				
1 household member	7.697,3	400	400	419,5
2 household members	8.880,6	1.528	1.528	277,8
3 household members	10.122,0	1.287	1.287	153,1
4 and more	9.617,9	4.824	4.824	82,9
<b>Population by age group</b>				
< 25	9.326,1	2.850	2.850	103,0
25 to 34	10.708,6	982	982	332,9
35 to 44	9.604,7	1.095	1.095	186,6
45 to 54	10.454,4	1.131	1.131	222,6
55 to 64	10.488,6	876	876	235,7
65+	6.475,9	1.105	1.105	140,0
<b>Population by sex</b>				
Male	9.620,4	3.945	3.945	116,4
Female	9.309,1	4.094	4.094	107,4

**Table 2.2.1.5: Mean (weighted), the total number of observations (before and after imputation) and Standard errors for the cross-sectional Income components**

Income Components at household level	EU-SILC 2006			
	Mean	Number of observations		Standard error
		Before imputation	After imputation	
Total household gross income (HY010)	19.981,3	3.559	3.621	303,3
Total disposable household income (HY020)	17.907,2	3,608	3.621	254,3
Total disposable household income before social transfers other than old-age and survivors' benefits (HY022)	16.879,1	3.588	3.600	246,5
Total disposable household income before social transfers including old-age and survivors' benefits (HY023)	15.883,8	3.274	3.284	265,4
Gross income from rental of a property or land (HY040G)	4.737,5	321	321	402,9
Family/children related allowances (HY050G)	545,0	2.550	2.550	15,8
Social exclusion not elsewhere classified (HY060G)	2.696,5	39	39	212,2
Housing allowances (HY070G)	2.751,3	102	102	343,1
Regular inter-household cash transfer received (HY080G)	2.508,5	306	306	198,1
Interest, dividends, profit from capital investment in unincorporated business (HY090G)	3.239,3	400	400	539,3
Income received by people aged under 16 (HY110G)	941,1	4	4	23,3
Regular taxes on wealth (HY120G)	48,5	2.121	2.121	2,1
Regular inter household cash transfer paid (HY130G)	2.152,6	479	479	105,2
Tax on income and social insurance contributions (HY140G)	2.303,4	2.672	2.714	67,8

**Table 2.2.1.5 (ctd.): Mean (weighted), the total number of observations (before and after imputation) and Standard errors for the cross-sectional Income components**

Income Components at personal level	EU-SILC 2006			
	Mean	Number of observations		Standard error
		Before imputation	After imputation	
Employee cash or near cash income (PY010G)	10.256,4	4.484	4.539	170,1
Non-cash employee income (PY020G)	1.502,0	103	103	132,2
Cash benefits or losses from self-employment (PY050G)	9.144,0	906	908	350,2
Pension from individual private plans (PY080G)	6.849,0	30	30	1.575,6
Unemployment benefits (PY090G)	2.649,8	334	334	565,5
Old-age benefits (PY100G)	5.502,3	1.718	1.718	166,4
Survivor benefits (PY110G)	3.759,1	80	80	275,7
Sickness benefits (PY120G)	753,8	89	89	89,4
Disability benefits (PY130G)	3.689,0	167	167	153,5
Education-related allowances (PY140G)	1.685,1	437	437	93,1

**Table 2.2.1.6 : Mean (weighted), the total number of observations (before and after imputation) and Standard errors for the cross-sectional Equivalised disposable income**

Equivalised disposable income	EU-SILC 2006			
	Mean	Number of observations		Standard error
		Before imputation	After imputation	
<b>Subclasses by household size</b>				
1 household member	7.829,6	533	533	387,9
2 household members	9.138,6	2.098	2.104	264,2
3 household members	10.336,5	1.845	1.863	138,2
4 and more	9.607,6	6.547	6.569	67,7
<b>Population by age group</b>				
< 25	9.305,0	3.902	3.911	84,1
25 to 34	10.718,2	1.373	1.385	289,9
35 to 44	9.575,8	1.508	1.515	147,1
45 to 54	10.458,0	1.532	1.535	192,0
55 to 64	10.745,9	1.211	1.219	233,0
65+	6.620,7	1.497	1.504	138,3
<b>Population by sex</b>				
Male	9.711,8	5.369	5.392	102,1
Female	9.396,5	5.654	5.677	96,8

## **2.3. Non-sampling errors**

### **2.3.1. Sampling frame and coverage errors**

The list of households from the 2001 Census of Population was used as sampling frame with a supplementary list of newly constructed houses (built after 2001 up to 2005). The Statistical Service of Cyprus was provided by the Electricity Authority of Cyprus (E.A.C.) with a list of domestic electricity consumers, which contained all the new connections of electricity between 2001 and 2005. The E.A.C. distinguishes domestic consumers from other consumers (e.g. industrial etc). It has been established that each domestic electricity consumer registered by the E.A.C. corresponds to the statistical definition of a housing unit. Each of these new electricity meter connections represented one new household.

Coverage problems encountered were:

1. The frame of the 2001 Census of Population was somehow outdated and as a result some housing units were found to be empty or to be used for other purposes other than housing.
2. Some houses included in the E.A.C. list were used as secondary residence, so they were out of scope of the survey.
3. Some houses listed by the E.A.C. were impossible to be located due to incomplete information regarding their addresses.

Housing units built during 2006 were not included in our sampling frame.

### **2.3.2. Measurement and processing errors**

#### **2.3.2.1. Measurement errors**

Possible sources of measurement errors are the questionnaire (design, content and wording), the method of data collection, the interviewers and the respondents.

The questionnaire for EU-SILC was developed on the basis of the EU-SILC Doc. 065 and Doc. 055. It was further developed after the pilot survey which was carried out during the period 14/06/2004 to 23/07/2004. Even though, the questionnaire was well tested and despite the fact that this was the 2<sup>nd</sup> wave of the survey, some questions were still difficult to be answered with precision. Difficulties due to memory lapses were encountered in questions regarding income from interests, dividends and shares (HY 090). Furthermore, difficulties were also encountered in distinguishing the various benefits and pensions.

As the method of data collection was Computer Assisted Personal Interviewing (CAPI) many validation and consistency checks were implemented during the interview. This had a positive impact on the quality of the data collected. Additionally, problems usually accounted to the routing of the questionnaire were fully avoided because of CAPI.

In order to reduce interviewer effects a two week training session for all the interviewers and an extra week training for newly recruited interviewers (i.e. those working for the first time in EU-SILC), was organised at the head offices of the Statistical Service. The training was conducted by permanent staff, Statistics Officers responsible for the EU-SILC survey. The aim of the training was to ensure that all interviewers were uniformly trained both in regard to the content of the questionnaire, as well as regards their behaviour during the interview. The extra week training for the newcomers focused mainly on the terminology of the survey giving as well general information on the previous round of the survey. In this way the newcomers were able to follow the other interviewers who worked the year before in the survey. In the second week where all interviewers were together, the training mainly focused on refreshing the terminology used in the questionnaire and on the understanding of new terminology used for the first time in the questionnaire. Main emphasis was given on difficult definitions and on explaining the various public benefits as well as the importance of the accuracy of the information collected. On the third week the interviewers had intensive sessions on working with their laptops and the electronic questionnaires in the environment of BLAISE. An interviewer manual was prepared explaining each and every single question of the questionnaire as well as their respective possible answers.

Apart from the 20 interviewers the training sessions were also attended by 5 supervisors. Each one of them was responsible for a group of 4 interviewers. During the fieldwork period the supervisor had meetings with each one of the interviewers in his/her group at least once a week. During these meetings, apart from discussing problems or questions raised during the week, the supervisors also collected (from the interviewers' laptops) all completed questionnaires. Their main duty during the data collection period was to examine the interviewers' work and refer back to them for inconsistencies or for problems identified in connection with terminology. Furthermore the supervisors had to double check some of the answers with respondents either by telephone or by personally visiting the household in question, especially in the case of unusual answers or missing data.

### 2.3.2.2. Processing errors

Processing errors were reduced because of CAPI and the implementation of validation and consistency checks during the data collection phase (BLAISE software). The processing errors were further reduced as the questionnaires were edited and coded by the supervisors prior to finalising the data files for processing. The coding requested was minimal, i.e. occupation (2 digits ISCO), economic activity (2 digits NACE) and country of birth; and was carried out using drop down lists.

The finalised data files prepared by supervisors were then processed using SAS programs with various other logical and consistency checks. The main errors found were connected to self-employment income and the recording of the various benefits and pensions under the correct income variable according to EU-SILC Doc. 065.

Before sending the final D-, R-, H- and P- files, data files were further checked using EUROSTAT's SAS programs.

### 2.3.3. Non-response errors

#### 2.3.3.1. Achieved sample size

The tables below present analytically the accepted personal interviews, as well as the accepted household interviews, within each rotational group.

**Table 2.3.3.1.1 : Sample Size and accepted Interviews (Year 2006)**

	<b>Total</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b><i>Accepted personal interviews</i></b>				
<b>Persons 16 yrs. and older</b>	6.499	2.168	2.124	2.207
<b>Sample persons</b>	6.320	2.110	2.064	2.146
<b>Co-residents</b>	179	58	60	61
<b>Accepted household interviews</b>	2.681	897	876	908

**Table 2.3.3.1.2 : Sample Size and accepted Interviews (Year 2005)**

	<b>Total</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b><i>Accepted personal interviews</i></b>				
<b>Persons 16 yrs. and older</b>	6.640	2.199	2.182	2.259
<b>Sample persons</b>	6.640	2.199	2.182	2.259
<b>Co-residents</b>	0	0	0	0
<b>Accepted household interviews</b>	2.767	924	907	936

### 2.3.3.2. Unit non-response

#### *Household non-response rates (NRh)*

DB120 is the record of contact at the address

DB130 is the household questionnaire result

DB135 is the household interview acceptance result

Address contact rate:

$$Ra = \frac{\sum[DB120 = 11]}{\sum[DB120 = all] - \sum[DB120 = 23]}$$

Proportion of complete household interviews accepted for the database:

$$Rh = \frac{\sum[DB135 = 1]}{\sum[DB130 = all]}$$

Household non-response rate:

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

#### *Individual non-response rates (NRp)*

RB245 is the respondent status

RB250 is the data status

Proportion of complete personal interviews within the households accepted for the database:

$$Rp = \frac{\sum[RB250 = 11 + 12 + 13 + 14^{(1)}]}{\sum[RB245 = 1 + 2 + 3]}$$

Individual non-response rate:

$$NRp = (1 - Rp) * 100$$

#### *Overall individual non-response rates (\* NRp)*

$$* NRp = (1 - (Ra * Rh * Rp)) * 100$$

<sup>(1)</sup>These are individuals for whom the information was completed from full record imputation (18 cases in EU-SILC 2006).



**First wave of longitudinal component (Year 2005)**

	<b>Total (R2, R3, R4)</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b>Ra</b>	0,9894	0,9933	0,9891	0,9856
<b>Rh</b>	0,9025	0,8902	0,9052	0,9123
<b>NRh (%)</b>	10,7131	11,5789	10,4640	10,0865
<b>Rp</b>	0,9974	0,9968	0,9973	0,9982
<b>NRp (%)</b>	0,2554	0,3173	0,2742	0,1768
<b>* NRp (%)</b>	10,9411	11,8595	10,7095	10,2454

**R2**

	DB120=11 and DB130=11 and DB135=1	DB120=11 and DB130=11 and DB135=2	DB120			DB130				Total
			21	22	23	21	22	23	24	
DB110=1	847	0	0	0	0	29	2	5	2	885
DB110=2	25	0	0	0	0	0	0	0	0	25
DB110=8	25	0	0	0	0	2	0	0	0	27
DB110=3	.	.	.	.	.	.	.	.	.	3
DB110=4	.	.	.	.	.	.	.	.	.	9
DB110=5	.	.	.	.	.	.	.	.	.	0
DB110=6	.	.	.	.	.	.	.	.	.	2
DB110=7	.	.	.	.	.	.	.	.	.	0
DB110=10	.	.	.	.	.	.	.	.	.	0
										951

**R3**

	DB120=11 and DB130=11 and DB135=1	DB120=11 and DB130=11 and DB135=2	DB120			DB130				Total
			21	22	23	21	22	23	24	
DB110=1	825	0	0	0	0	29	4	4	3	865
DB110=2	25	0	1	0	0	0	0	0	0	26
DB110=8	26	0	0	0	0	4	0	0	0	30
DB110=3	.	.	.	.	.	.	.	.	.	4
DB110=4	.	.	.	.	.	.	.	.	.	10
DB110=5	.	.	.	.	.	.	.	.	.	2
DB110=6	.	.	.	.	.	.	.	.	.	0
DB110=7	.	.	.	.	.	.	.	.	.	0
DB110=10	.	.	.	.	.	.	.	.	.	0
										937

**R4**

	DB120=11 and DB130=11 and DB135=1	DB120=11 and DB130=11 and DB135=2	DB120			DB130				Total
			21	22	23	21	22	23	24	
DB110=1	855	0	0	0	0	28	0	8	2	893
DB110=2	28	0	2	0	0	0	0	0	0	30
DB110=8	25	0	0	0	0	4	0	0	0	29
DB110=3	.	.	.	.	.	.	.	.	.	1
DB110=4	.	.	.	.	.	.	.	.	.	7
DB110=5	.	.	.	.	.	.	.	.	.	3
DB110=6	.	.	.	.	.	.	.	.	.	2
DB110=7	.	.	.	.	.	.	.	.	.	0
DB110=10	.	.	.	.	.	.	.	.	.	0
										965

**Total (R2, R3, R4)**

	DB120=11 and DB130=11 and DB135=1	DB120=11 and DB130=11 and DB135=2	DB120			DB130				Total
			21	22	23	21	22	23	24	
DB110=1	2.527	0	0	0	0	86	6	17	7	2.643
DB110=2	78	0	3	0	0	0	0	0	0	81
DB110=8	76	0	0	0	0	10	0	0	0	86
DB110=3	.	.	.	.	.	.	.	.	.	8
DB110=4	.	.	.	.	.	.	.	.	.	26
DB110=5	.	.	.	.	.	.	.	.	.	5
DB110=6	.	.	.	.	.	.	.	.	.	4
DB110=7	.	.	.	.	.	.	.	.	.	0
DB110=10	.	.	.	.	.	.	.	.	.	0
										2.853

**Wave response rates (%)**

	<b>Total (R2, R3, R4)</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b>Wave response rate</b>	93,9713	94,3218	93,4899	94,0933
<b>Refusal rate</b>	3,3649	3,2597	3,5219	3,3161
<b>No-contacted and others</b>	2,6639	2,4185	2,9883	2,5907

	<b>Total (R2, R3, R4)</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b>Longitudinal follow-up rate (%)</b>	95,3379	95,3463	95,0386	95,6197

	<b>Total (R2, R3, R4)</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b>Follow-up ratio</b>	0,9808	0,9805	0,9791	0,9829

	<b>Total (R2, R3, R4)</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b>Achieved sample size ratio</b>	0,9689	0,9708	0,9658	0,9701

**Response rate for persons**

**Sample persons (RB100=1) aged 16 and over (RB245=1) by rotational group code (Year 2006)**

**R2**

	RB250										
	11	12	13	14	21	22	23	31	32	33	Total
<b>RB110=1</b>	2.072	0	0	3	0	0	0	0	0	0	2.075
<b>RB110=2</b>	35	0	0	0	0	0	0	0	0	0	35

**R3**

	RB250										
	11	12	13	14	21	22	23	31	32	33	Total
<b>RB110=1</b>	2.028	0	0	3	0	0	0	0	0	0	2.031
<b>RB110=2</b>	33	0	0	0	0	0	0	0	0	0	33

**R4**

	RB250										
	11	12	13	14	21	22	23	31	32	33	Total
<b>RB110=1</b>	2.111	0	0	5	0	0	0	0	0	0	2.116
<b>RB110=2</b>	30	0	0	0	0	0	0	0	0	0	30

**Total (R2, R3, R4)**

	RB250										
	11	12	13	14	21	22	23	31	32	33	Total
<b>RB110=1</b>	6.211	0	0	11	0	0	0	0	0	0	6.222
<b>RB110=2</b>	98	0	0	0	0	0	0	0	0	0	98

**Non-Sample persons (RB100=2) aged 16 and over (RB245=1) by rotational group code (Year 2006)**

**R2**

	RB250										
	11	12	13	14	21	22	23	31	32	33	Total
<b>RB110=3</b>	58	0	0	0	0	0	0	0	0	0	58

**R3**

	RB250										
	11	12	13	14	21	22	23	31	32	33	Total
<b>RB110=3</b>	58	0	0	2	0	0	0	0	0	0	60

R4

	RB250										
	11	12	13	14	21	22	23	31	32	33	Total
RB110=3	60	0	0	1	0	0	0	0	0	0	61

Total (R2, R3, R4)

	RB250										
	11	12	13	14	21	22	23	31	32	33	Total
RB110=3	176	0	0	3	0	0	0	0	0	0	179

Wave response rates (%)

	Total (R2, R3, R4)	R2	R3	R4
Sample persons	99,8259	99,8578	99,8547	99,7670
Co-residents	98,3240	100,0000	96,6667	98,3607

Longitudinal follow-up rate (%)

	Rate of RB250								
	11, 12, 13	14	21	22	23	31	32	33	
R2	99,8578	0,1422	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	
R3	99,8547	0,1453	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	
R4	99,7670	0,2330	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	
Total (R2, R3, R4)	99,8259	0,1741	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	

Response rate for non-sample persons (%)

	Total (R2, R3, R4)	R2	R3	R4
Non-sample persons	98,3240	100,0000	96,6667	98,3607

Sample persons (RB100=1) aged 16 and over (RB245=1) by rotational group code (Year 2005)

R2

	RB250										
	11	12	13	14	21	22	23	31	32	33	Total
RB110=1	2.199	0	0	0	0	0	7	1	0	0	2.207

R3

	RB250										
	11	12	13	14	21	22	23	31	32	33	Total
RB110=1	2.182	0	0	0	0	0	5	0	0	0	2.187

R4

	RB250										Total
	11	12	13	14	21	22	23	31	32	33	
<b>RB110=1</b>	2.259	0	0	0	0	0	4	0	0	0	2.263

Total (R2, R3, R4)

	RB250										Total
	11	12	13	14	21	22	23	31	32	33	
<b>RB110=1</b>	6.640	0	0	0	0	0	16	1	0	0	6.657

Achieved sample size ratio

	Total (R2, R3, R4)	R2	R3	R4
<b>Sample persons aged 16+</b>	0,9502	0,9582	0,9445	0,9478
<b>Co-residents aged 16+</b>	NA	NA	NA	NA
<b>All persons aged 16+</b>	0,9767	0,9845	0,9711	0,9743

**2.3.3.3. Distribution of households ‘by household status’ (DB110), 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**

**Table 2.3.3.3.1 : Distribution of DB110 (Year 2006)**

<b>DB110 – Contact at address</b>	<b>Total</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b>At the same address as last interview (1)</b>	2.643	885	865	893
<b>Entire household moved to a private household within the country (2)</b>	81	25	26	30
<b>Entire household moved to a collective household or institution within the country (3)</b>	8	3	4	1
<b>Household moved outside the country (4)</b>	26	9	10	7
<b>Entire household died (5)</b>	5	0	2	3
<b>Household does not contain sample person (6)</b>	4	2	0	2
<b>Address not contacted (unable to access or lost, i.e. no record of what happened to the household) (7)</b>	0	0	0	0
<b>Split-off household (8)</b>	86	27	30	29
<b>New address added to the sample this wave or first wave (9)</b>	na	na	na	na
<b>Fusion (10)</b>	0	0	0	0
<b>Total</b>	<b>2.853</b>	<b>951</b>	<b>937</b>	<b>965</b>

**Table 2.3.3.3.2 : Distribution of DB110 (Year 2005)**

<b>DB110 – Contact at address</b>	<b>Total</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b>At the same address as last interview (1)</b>	na	na	na	na
<b>Entire household moved to a private household within the country (2)</b>	na	na	na	na
<b>Entire household moved to a collective household or institution within the country (3)</b>	na	na	na	na
<b>Household moved outside the country (4)</b>	na	na	na	na
<b>Entire household died (5)</b>	na	na	na	na
<b>Household does not contain sample person (6)</b>	na	na	na	na
<b>Address not contacted (unable to access or lost, i.e. no record of what happened to the household) (7)</b>	na	na	na	na
<b>Split-off household (8)</b>	na	na	na	na
<b>New address added to the sample this wave or first wave (9)</b>	3.403	1.135	1.119	1.149
<b>Fusion (10)</b>	na	na	na	na
<b>Total</b>	<b>3.403</b>	<b>1.135</b>	<b>1.119</b>	<b>1.149</b>

**Table 2.3.3.3.3 : Distribution of DB120 (Year 2006)**

<b>DB120 – Contact at address</b>	<b>Total</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b>Address contacted (11)</b>	2.807	937	920	950
<b>Address cannot be located (21)</b>	3	0	1	2
<b>Address unable to access (22)</b>	0	0	0	0
<b>Address does not exist or empty etc. (23)</b>	0	0	0	0
<b>Total</b>	<b>2.810</b>	<b>937</b>	<b>921</b>	<b>952</b>

**Table 2.3.3.3.4 : Distribution of DB120 (Year 2005)**

<b>DB120 – Contact at address</b>	<b>Total</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b>Address contacted (11)</b>	3.066	1.038	1.002	1.026
<b>Address cannot be located (21)</b>	33	7	11	15
<b>Address unable to access (22)</b>	0	0	0	0
<b>Address does not exist or empty etc. (23)</b>	304	90	106	108
<b>Total</b>	<b>3.403</b>	<b>1.135</b>	<b>1.119</b>	<b>1.149</b>

**Table 2.3.3.3.5 : Distribution of DB130 (Year 2006)**

<b>DB130 – Household questionnaire result</b>	<b>Total</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b>Household questionnaire completed (11)</b>	2.681	897	876	908
<b>Refusal to co-operate (21)</b>	96	31	33	32
<b>Entire household temporarily away (22)</b>	6	2	4	0
<b>Household unable to respond (23)</b>	17	5	4	8
<b>Other reasons (24)</b>	7	2	3	2
<b>Total</b>	<b>2.807</b>	<b>937</b>	<b>920</b>	<b>950</b>

**Table 2.3.3.3.6 : Distribution of DB130 (Year 2005)**

<b>DB130 – Household questionnaire result</b>	<b>Total</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b>Household questionnaire completed (11)</b>	2.767	924	907	936
<b>Refusal to co-operate (21)</b>	191	78	61	52
<b>Entire household temporarily away (22)</b>	44	14	15	15
<b>Household unable to respond (23)</b>	39	14	13	12
<b>Other reasons (24)</b>	25	8	6	11
<b>Total</b>	<b>3.066</b>	<b>1.038</b>	<b>1.002</b>	<b>1.026</b>

**Table 2.3.3.3.7 : Distribution of DB135 (Year 2006)**

<b>DB135 – Household interview acceptance</b>	<b>Total</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b>Interview accepted for database (1)</b>	2.681	897	876	908
<b>Interview rejected (2)</b>	0	0	0	0
<b>Total</b>	<b>2.681</b>	<b>897</b>	<b>876</b>	<b>908</b>

**Table 2.3.3.3.8 : Distribution of DB135 (Year 2005)**

<b>DB135 – Household interview acceptance</b>	<b>Total</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<b>Interview accepted for database (1)</b>	2.767	924	907	936
<b>Interview rejected (2)</b>	0	0	0	0
<b>Total</b>	<b>2.767</b>	<b>924</b>	<b>907</b>	<b>936</b>

#### **2.3.3.4. Distribution of persons by membership status**

**Table 2.3.3.4.1. Distribution of persons by membership status (RB110 – Year 2006)**

<b>RB110 – Membership Status</b>	<b>Total</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<i>For current household members</i>				
<b>Was in this household in previous waves or current household member (1)</b>	7.840	2.638	2.55	2.657
<b>Moved into this household from another sample household since previous wave (2)</b>	120	37	46	37
<b>Moved into this household from outside sample since previous wave (3)</b>	192	62	65	65
<b>Newly born into this household since last wave (4)</b>	64	17	24	23
<i>Not current household members</i>				
<b>Moved out since previous wave or last interview if not contacted in previous wave (5)</b>	203	64	70	69
<b>Died (6)</b>	24	7	12	5
<b>Lived in the household at least three months during the income reference period but was not recorded in the register of this household (7)</b>	26	12	5	9
<b>Total</b>	<b>8.469</b>	<b>2.837</b>	<b>2.767</b>	<b>2.865</b>



### 2.3.3.5. Item non-response

The tables that follow provide an overview of non-response for all household and individual income variables.

**Table 2.3.3.5.1: Distribution of item non-response, household level income variables**

<b>Item non-response</b>	<b>% of households having received an amount</b>	<b>% of households with missing values</b>	<b>% of households with partial information (before imputation)</b>
<b>Total household gross income HY010</b>	100,0	0,0	1,7
<b>Total disposable household income HY020</b>	100,0	0,0	0,4
<b>Total disposable household income before social transfers other than old-age and survivor's benefits HY022</b>	99,4	0,0	0,4
<b>Total disposable household income before social transfers including old-age and survivor's benefits HY023</b>	90,7	0,0	0,3
<b>Income from rental of a property or land HY040G</b>	8,9	0,0	0,0
<b>Family/children related allowances HY050G</b>	70,4	0,0	0,0
<b>Social exclusion not elsewhere classified HY060G</b>	1,1	0,0	0,0
<b>Housing allowances HY070G</b>	2,8	0,0	0,0
<b>Regular inter-household cash transfer received HY080G</b>	8,5	0,0	0,0
<b>Interest, dividends, profit from capital investment in unincorporated business HY090G</b>	11,1	0,0	0,0
<b>Income received by people aged under 16 HY110G</b>	0,1	0,0	0,0
<b>Regular taxes on wealth HY120G</b>	58,6	0,0	0,0
<b>Regular inter household cash transfer paid HY130G</b>	13,2	0,0	0,0

**Table 2.3.3.5.2: Distribution of item non-response, personal level income variables**

<b>Item non-response</b>	<b>% of persons 16+ having received an amount</b>	<b>% of persons with missing values</b>	<b>% of persons with partial information (before imputation)</b>
<b>Employee cash or near cash income PY010G</b>	51,8	0,0	0,77
<b>Non-cash employee income PY020G</b>	1,8	0,0	0,0
<b>Contributions to individual private pension plans PY035G</b>	0,5	0,0	0,01
<b>Cash benefits or losses from self-employment PY050G</b>	10,3	0,0	0,05
<b>Pension from individual private plans PY080G</b>	0,3	0,0	0,01
<b>Unemployment benefits PY090G</b>	3,8	0,0	0,0
<b>Old-age benefits PY100G</b>	19,6	0,0	0,01
<b>Survivor benefits PY110G</b>	0,9	0,0	0,0
<b>Sickness benefits PY120G</b>	1,0	0,0	0,01
<b>Disability benefits PY130G</b>	1,9	0,0	0,0
<b>Education-related allowances PY140G</b>	5,0	0,0	0,0

#### **2.4. Mode of data collection**

The mode of data collection for EU-SILC survey was CAPI. PAPI was only used in the extreme case of a technical problem with the interviewer's laptop. Proxy interviews occurred mainly for persons serving as national guards or for students fully supported by their parents and temporarily away; both of these categories were considered to be members of their parents' households. The following tables present the distribution of individuals aged 16 or over by data status and type of interview.

**Table 2.4.1: Distribution of individuals aged 16 or over by data status and rotational group**

RB250 Data status	Total		R5		R2		R3		R4	
	Count	%	Count	%	Count	%	Count	%	Count	%
<b>Total</b>	8.757	100	2.258	100	2.168	100	2.124	100	2.207	100
<b>information completed only from interview (11)</b>	8.739	99,8	2.254	99,8	2.165	99,9	2.119	99,8	2.201	99,7
<b>information completed from full record imputation (14)</b>	18	0,2	4	0,2	3	0,1	5	0,2	6	0,3
<b>individual unable to respond and no proxy possible (21)</b>	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
<b>refusal to co-operate (23)</b>	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
<b>person temporarily away and no proxy possible (31)</b>	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
<b>no contact for other reasons (32)</b>	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
<b>information not completed: reason unknown (33)</b>	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0

**Table 2.4.2: Distribution of individuals aged 16 or over by type of interview and rotational group**

RB260 Type of interview	Total		R5		R2		R3		R4	
	Count	%	Count	%	Count	%	Count	%	Count	%
<b>Total</b>	8.739 <sup>(1)</sup>	100	2.254	100	2.165	100	2.119	100	2.201	100
<b>face to face interview-PAPI (1)</b>	2	0,0	0	0,0	1	0,0	1	0,0	0	0,0
<b>face to face interview-CAPI (2)</b>	7.631	87,3	1.982	87,9	1.909	88,2	1.846	87,1	1.894	86,1
<b>proxy interview (5)</b>	1.106	12,7	272	12,1	255	11,8	272	12,8	307	13,9

<sup>(1)</sup> The total number of individuals aged 16 and over is 8.757. The information for 18 of these individuals was completed from full record imputation.

## 2.5. Imputation procedure

No specific imputation procedure was applied, since there were no non-response items. Only in the very few cases where gross income or taxes on income at source or social insurance contributions were impossible to collect, the interviewers were instructed to collect at least net value for the specific income component. It was then converted to gross by applying the existing tax system and social insurance contributions rules.

## 2.6. Imputed rent

No method was used to calculate imputed rent. Imputed rent was self-evaluated, due to the fact that rental market in Cyprus is very small (10%-11%).

## 2.7. Company cars

To value the benefit of private use of company car the approach of ‘Valuation on the basis of accrued saving’ according to Doc. EU-SILC 065 was followed. In order to value the amount the recipient would have to pay over the reference period to enjoy the same benefit from the use of own vehicle the sum of (i) & (ii) below were computed:

- (i) **Depreciation** over the reference period in the capital value of the car,
- (ii) Coverage by the employer of other costs, which would normally fall on the user of his/her own car. The latter may cover car insurance and possibly maintenance and major repair costs, but would normally exclude fuel and other running costs.

External sources had to be used to construct suitable average schedules for (i) and (ii), rather than to collect (i) and (ii) from individual respondents.

The main requirement was to construct a ‘depreciation model’:

$$\text{Depreciation} = \frac{\text{Purchase prices} - \text{Selling prices at } X}{X},$$

where X = ‘the average age of a company car’

To calculate the ‘Purchase price’ and the ‘Selling price’, the make, the model, the registration year and other characteristics of the car were used. A list of prices and manufacturer’s recommended retail prices (RRP) were also used for a wide range of new cars. If the RRP was not available, then it was estimated based on the price of a similar car or the price relative to other cars with a similar pricing structure. The list price included VAT and vehicle registration tax. For calculating ‘the average age of a company car’, an average of 5 was considered.

## 3. COMPARABILITY

### 3.1. Basic concepts and definitions

#### *Reference population*

There is no difference to the standard EU-SILC definition, hence the reference population is defined as all the households and their members living in the areas under the effective control of

the Government of the Republic of Cyprus. Population in collective households and institutions is excluded.

*Private household definition*

No deviation from the standard EU-SILC definition. A private household is a person living alone or a group of persons living together in the same dwelling sharing expenses, including the joint provision of the essentials of living.

*Household membership*

The definition of household membership is the one recommended by EUROSTAT. Students (either in Cyprus or abroad) are considered to be members of their parents' household given they are fully financially supported by them.

*Income reference period(s) used*

For EU-SILC 2006 the income reference period was 2005.

*The period for taxes on income and social insurance contributions*

The period for taxes payments/refunds and social insurance contributions was 2005. Tax refunds received during 2005 referred to income received in previous years.

*Reference period for taxes on wealth*

The reference period for taxes on wealth was 2005.

*The lag between the income reference period and current variables*

Since EU-SILC 2006 was carried out during the middle of March and the middle of July 2006 the time lag between the income reference period and current variables varied between 3 to 7 months.

*Total duration of the data collection of the sample*

The data collection phase of the survey lasted 4 months.

*Basic information on activity status during the income reference period*

The information on activity status was collected using an activity calendar covering each month of the income reference period.

## **3.2. Components of income**

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

The total household gross income and its components were calculated based on the definitions of income provided in the Commission Regulation (EC) 1980/2003 and the guidelines given in DOC.065. The definitions were fully applied and an effort was made to collect data as accurately as possible.

Income variables: imputed rent, interest paid on mortgages, non-cash employee income (except company car), value of goods produced for own consumption and employers' social insurance contributions were not collected for EU-SILC 2006, since they are mandatory from 2007.

Gross monthly earnings for employees were not collected as the gender pay gap is calculated from other sources than EU-SILC.

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

Data on income variables were collected by Computer Assisted Personal Interviewing. Each and every income component was separately collected.

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

The instructions to the interviewers were to collect each income component as gross and to record separately taxes on income at source and social insurance contributions. In the very few cases where gross income was impossible to collect, net income was recorded.

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

In the cases where gross income or taxes on income at source or social insurance contributions were impossible to collect, at least net value was collected for the specific income component. It was then converted to gross by applying the existing tax system and social insurance contributions rules.

## **3.3. Tracing rules**

There were no differences between the national tracing rules and the standard EU-SILC tracing rules.

## **4. COHERENCE**

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

In the tables that follow we compare the results between EU-SILC 2005 and EU-SILC 2006 on household and personal income components. More specifically in the two tables that follow the percentages of households and persons having received an amount on specific income target variable, as well as its mean value per household are presented.

The results show that the percentages of either households or persons receiving an amount between the two surveys are very close and have consistent. The only big difference corresponds to the "family children related allowance" (HY05G), which was firstly introduced in 2004. People had to apply in order to receive the allowance and as it was something new in 2004 not all beneficiaries knew about it. During 2005 it became much more known and people applied much earlier and within the time limits they had and so more families received the amount.

Another difference that occurred at household level corresponded to "social exclusion not elsewhere classified" (HY060G). The main reason for that was that during 2005 interviewers did not record benefits as detailed as during 2006.

In general the surveys justify the fact that economy in Cyprus between 2005 (EU-SILC 2006) and 2004 (EU-SILC 2005) was improved. Compensation of employees and imputed wages and salaries of self-employed increased by 5,5% (National Accounts). Furthermore earnings of the employees increase every six months (July and December) automatically based on the cost of leaving allowance. The percentages of persons receiving an amount between the two surveys are very close.

**Table 4.1.1: Comparison between EU-SILC 2005 and 2006 for all income target variables at household level**

Income target variable	EU-SILC			
	2005		2006	
	% of households having received an amount	Mean (weighted) income per household (CY £)	% of households having received an amount	Mean (weighted) income per household (CY £)
Total household gross income HY010	100,0	18.239	100,0	19.981
Total disposable household income HY020	100,0	16.338	100,0	17.907
Total disposable household income before social transfers other than old-age and survivor's benefits HY022	98,9	15.342	99,4	16.773
Total disposable household income before social transfers including old-age and survivor's benefits HY023	89,5	13.273	90,7	14.521
Income from rental of a property or land HY040G	8,3	341	8,9	392
Family/children related allowances HY050G	54,9	350	70,4	370
Social exclusion not elsewhere classified HY060G	3,0	68	1,1	28
Housing allowances HY070G	2,9	84	2,8	92
Regular inter-household cash transfer received HY080G	7,1	172	8,5	209
Interest, dividends, profit from capital investment in unincorporated business HY090G	7,1	219	11,1	333
Regular taxes on wealth HY120G	60,4	28	58,6	27
Regular inter household cash transfer paid HY130G	10,7	223	13,2	264



**Table 4.1.2: Comparison between EU-SILC 2005 and 2006 for all income target variables at individual level**

Income target variable	EU-SILC			
	2005		2006	
	% of persons 16+ having received an amount	Mean (weighted) income per household (CY £)	% of persons 16+ having received an amount	Mean (weighted) income per household (CY £)
Employee cash or near cash income PY010G	51,1	12.091	51,8	13.269
Non-cash employee income PY020G	1,0	41	1,8	45
Cash benefits or losses from self-employment PY050G	9,5	2.263	10,3	2.290
Unemployment benefits PY090G	3,6	169	3,8	249
Old-age benefits PY100G	18,4	2.021	19,6	2.233
Survivor benefits PY110G	1,0	94	0,9	76
Sickness benefits PY120G	1,1	23	1,0	19
Disability benefits PY130G	1,6	120	1,9	164
Education-related allowances PY140G	5,1	182	5,0	211

The next table presents the labour force participation rates as they were recorded by Labour Force Survey 2006 and EU-SILC 2006. There is one main methodological difference between the two surveys, for LFS students studying abroad or national guards (compulsory army service) are not considered to be part of the population, where as they are part of the EU-SILC population. Thus the totals as well as the rates of the ages 16-24 are not comparable. The rest of the results up to the age of 59 fit very well. EU-SILC though underestimates aged over 60 years.

**Table 4.1.3: Comparison between Labour Force Survey 2006 and EU-SILC 2006 for the labour force participation rates**

Age Groups	Total		Males		Females	
	LFS	EU-SILC	LFS	EU-SILC	LFS	EU-SILC
16 - 19	11,3	11,2	14,8	11,0	8,5	11,5
20 - 24	72,0	49,9	75,8	47,5	68,4	52,3
25 - 29	88,0	85,2	92,7	90,2	83,4	80,1
30 - 34	89,8	90,4	97,5	98,7	82,3	82,5
35 - 39	88,0	89,1	97,3	97,3	79,5	81,5
40 - 44	87,0	85,7	94,6	96,7	79,7	75,2
45 - 49	85,2	85,3	96,3	98,6	74,7	75,3
50 - 54	77,7	77,4	93,3	92,6	62,4	62,6
55 - 59	65,1	66,2	83,2	89,8	47,9	44,0
60 - 64	43,7	32,8	62,9	46,1	25,6	20,4
65+	10,1	6,6	17,0	12,7	4,4	1,5
<b>Total</b>	<b>64,9</b>	<b>60,3</b>	<b>75,1</b>	<b>68,9</b>	<b>55,4</b>	<b>52,0</b>