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# **INTERMEDIATE QUALITY REPORT**

**EU-SILC-2008**

**Iceland**

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# 1. Common cross-sectional EU indicators 2008 (income year 2007)

	Indicator	SE	CI
At risk of poverty threshold	1693646	16342,69	32031,68
Two adults with two children	3556657	16342,69	32031,68
Dispersion around the ARPR threshold: 40%	2,39	0,30	0,59
Dispersion around the ARPR threshold: 40%, males	2,72	0,40	0,78
Dispersion around the ARPR thresh.: 40%, females	2,06	0,34	0,68
Dispersion around the ARPR threshold: 50%	4,48	0,42	0,82
Dispersion around the ARPR threshold: 50%, males	4,87	0,50	0,99
Dispersion around the ARPR thresh.: 50%, females	4,08	0,48	0,94
Dispersion around the ARPR threshold: 60%	10,06	0,60	1,18
Dispersion around the ARPR threshold: 60%, males	9,47	0,67	1,31
Dispersion around the ARPR thresh.: 60%, females	10,67	0,74	1,46
Dispersion around the ARPR threshold: 70%	17,32	0,72	1,40
Dispersion around the ARPR threshold: 70%, males	16,63	0,82	1,60
Dispersion around the ARPR thresh.: 70%, females	18,03	0,86	1,69
The Gini coefficient	27,26	0,80	1,57
S80 / S20	3,84	0,13	0,26
ARPR (At risk of poverty rate) Total	10,06	0,60	1,18
ARPR males	9,47	0,67	1,31
ARPR females	10,67	0,74	1,46
ARPR 0-17	11,22	1,10	2,17
ARPR 18-24	12,51	1,57	3,08
ARPR 18-24, males	12,38	1,91	3,75
ARPR 18-24, females	12,64	2,14	4,19
ARPR 25-49	9,03	0,75	1,47
ARPR 25-49, males	9,55	1,04	2,03
ARPR 25-49, females	8,47	0,84	1,65
ARPR 50-64	5,72	0,80	1,57
ARPR 50-64, males	5,88	0,99	1,94
ARPR 50-64, females	5,56	1,00	1,96
ARPR 65+	14,99	1,76	3,45
ARPR 65+, males	9,54	1,97	3,86
ARPR 65+, females	19,67	2,46	4,82
ARPR 18+	9,66	0,56	1,10
ARPR 18+, males	9,10	0,69	1,36
ARPR 18+, females	10,23	0,70	1,38
ARPR 18-64	8,71	0,57	1,11
ARPR 18-64, males	9,03	0,74	1,44
ARPR 18-64, females	8,38	0,66	1,29
ARPR 0-64	9,44	0,63	1,24
ARPR 0-64, males	9,46	0,70	1,38
ARPR 0-64, females	9,42	0,76	1,49
ARPR, equ_022 <sup>1</sup> , total	19,02	0,71	1,38
ARPR, equ_022, male	18,35	0,80	1,58
ARPR, equ_022, female	19,71	0,84	1,65

ARPR, equ_022, 0-17	24,64	1,36	2,66
ARPR, equ_022, 18+	17,07	0,64	1,25
ARPR, equ_022, 18+, male	15,73	0,79	1,55
ARPR, equ_022, 18+, female	18,44	0,79	1,55
ARPR, equ_022, 18-64	16,53	0,68	1,33
ARPR, equ_022, 18-64, male	15,86	0,85	1,68
ARPR, equ_022, 18-64, female	17,24	0,81	1,59
ARPR, equ_022, 65+	20,12	1,92	3,77
ARPR, equ_022, 65+, male	14,93	2,23	4,36
ARPR, equ_022, 65+, female	24,57	2,58	5,06
ARPR, equ_023 <sup>2</sup> , total	26,86	0,76	1,48
ARPR, equ_023, male	25,49	0,86	1,68
ARPR, equ_023, female	28,27	0,90	1,76
ARPR, equ_023, 0-17	25,46	1,37	2,68
ARPR, equ_023, 18+	27,35	0,75	1,46
ARPR, equ_023, 18+, male	25,14	0,89	1,75
ARPR, equ_023, 18+, female	29,60	0,90	1,76
ARPR, equ_023, 18-64	18,31	0,70	1,37
ARPR, equ_023, 18-64, male	17,35	0,87	1,71
ARPR, equ_023, 18-64, female	19,31	0,84	1,65
ARPR, equ_023, 65+	78,40	1,76	3,45
ARPR, equ_023, 65+, male	73,99	2,37	4,65
ARPR, equ_023, 65+, female	82,19	1,95	3,82
ARPR, activity total	9,48	0,56	1,09
ARPR, activity total, male	8,91	0,69	1,36
ARPR, activity total, female	10,06	0,70	1,38
ARPR, working	6,68	0,51	0,99
ARPR, working, male	6,88	0,66	1,28
ARPR, working, female	6,45	0,63	1,24
ARPR, not working	18,77	1,51	2,96
ARPR, not working, male	17,69	2,19	4,30
ARPR, not working, female	19,53	1,82	3,57
ARPR, unemployed	25,10	7,86	15,41
ARPR, unemployed, male	27,25	11,23	22,00
ARPR, unemployed, female	21,96	9,94	19,49
ARPR, retired	18,13	1,96	3,84
ARPR, retired, male	13,56	2,63	5,15
ARPR, retired, female	21,28	2,47	4,84
ARPR, other activity	19,27	2,35	4,61
ARPR, other activity, male	24,27	3,91	7,66
ARPR, other activity, female	16,01	2,52	4,94
ARPR, No dependent WI <sup>3</sup> =0	23,12	5,94	11,65
ARPR, No dependent 0<WI<1	15,21	2,25	4,41
ARPR, No dependent WI=1	4,79	0,86	1,68
ARPR, With dependent WI=0	25,54	11,14	21,84
ARPR, With dependent 0<WI<0.5	44,12	10,36	20,31
ARPR, With dependent 0.5<WI<1	12,16	1,73	3,39
ARPR, With dependent WI=1	6,55	0,87	1,71
ARPR, full and part time	5,47	0,47	0,92

ARPR, full and part time, male	5,92	0,61	1,19
ARPR, full and part time, female	4,90	0,58	1,14
ARPR, full time	5,23	0,48	0,94
ARPR, full time, male	5,79	0,62	1,21
ARPR, full time, female	4,39	0,61	1,20
ARPR, part time	7,14	1,33	2,60
ARPR, part time, male	8,81	3,25	6,37
ARPR, part time, female	6,73	1,44	2,83
ARPR, education total	6,69	0,51	1,00
ARPR, education total, male	6,85	0,66	1,29
ARPR, education total, female	6,49	0,64	1,25
ARPR, ISCED 0-2	7,00	0,87	1,70
ARPR, ISCED 0-2, male	7,03	1,14	2,23
ARPR, ISCED 0-2, female	6,96	1,14	2,24
ARPR, ISCED 3-4	8,25	0,84	1,64
ARPR, ISCED 3-4, male	7,76	1,02	2,00
ARPR, ISCED 3-4, female	9,00	1,24	2,43
ARPR, ISCED 5-6	4,03	0,72	1,41
ARPR, ISCED 5-6, male	4,85	1,16	2,27
ARPR, ISCED 5-6, female	3,36	0,85	1,67
ARPR, owners and tenants	10,06	0,60	1,18
ARPR, owners	7,79	0,58	1,14
ARPR, tenants	25,52	2,53	4,97
ARPR, households without children	11,55	0,89	1,75
ARPR, one person under 65	20,43	2,54	4,99
ARPR, one person 65 or older	35,79	4,14	8,12
ARPR, one female	28,56	3,22	6,31
ARPR, one male	22,45	3,01	5,90
ARPR, two persons under 65 years, no child	6,75	1,22	2,40
ARPR, two adults without children	5,01	1,33	2,61
ARPR, other households without children	3,74	1,31	2,56
ARPR, households with children	9,10	0,82	1,60
ARPR, one adult with child	28,00	4,17	8,17
ARPR, two adults with one child	5,97	1,29	2,54
ARPR, two adults with two children	3,80	0,96	1,88
ARPR, two adults with three or more children	12,88	2,10	4,11
ARPR, three adults and children	4,20	1,26	2,47
Aggregate replacement ratio. 65+ vs 45-54	0,44	0,01	0,02
Aggregate replacement ratio, 65+ vs 45-54, males	0,41	0,01	0,02
Aggregate replacement ratio, 65+ vs 45-54, females	0,51	0,02	0,04
Relative median income ratio, 65+ vs 45-54	0,71	0,05	0,09
Relative median income ratio, 65+ vs 45-54, males	0,77	0,05	0,11
Relative median income ratio, 65+ vs 45-54, females	0,68	0,06	0,11
RRPG (Relative at risk of poverty gap) total	14,92	1,30	2,55
RRPG, males	17,90	1,78	3,49
RRPG, females	12,59	1,34	2,62
RRPG, age 0-17	12,63	1,86	3,65

RRPG, age 18+	15,77	1,32	2,59
RRPG, age 18+, male	20,38	2,19	4,29
RRPG, age 18+, female	13,12	1,31	2,57
RRPG, age 18-64	19,59	1,80	3,52
RRPG, age 18-64, male	23,24	2,63	5,16
RRPG, age 18-64, female	15,77	1,75	3,44
RRPG, age 65+	11,98	1,84	3,61
RRPG, age 65+, male	13,65	3,34	6,54
RRPG, age 65+, female	8,79	1,93	3,78
MD (material deprivation) total	8,80	0,59	1,15
MD, female	8,72	0,67	1,31
MD, male	8,88	0,67	1,31
MD, age 0-17	10,29	1,05	2,05
MD, age 18-64	8,80	0,61	1,19
MD, age 18-64, male	8,19	0,73	1,43
MD, age 18-64, female	9,44	0,73	1,44
MD, age 65+	5,32	1,04	2,03
MD, age 65+, male	4,05	1,24	2,43
MD, age 65+, female	6,41	1,41	2,76

1: equ\_022 is based on the income variable HY022 and refers to at-risk-of-poverty rate before social transfers except old-age and survivors benefits

2: equ\_023 is based on the income variable HY023 and refers to at-risk-of-poverty rate before all social transfers

3: WI stands for work intensity of the household. 1 meaning that all household members of working age are working while 0 means that none of the household members of working age is working. The variable WI is analysed based on whether there are dependents or children in the household or not.

## 2. Accuracy

### 2.1. Sample design

#### 2.1.1 Type of sampling

There were four even one-stage simple random samples without stratification used for the 2008 EU-SILC in Iceland.

#### 2.1.2 Sampling units

The sampling units are persons aged 16 years or more living in private households, selected from the Icelandic population register.

#### 2.1.3 Stratification and sub-stratification criteria

The sample is post stratified, see 2.8.

#### 2.1.4 Sample size and allocation criteria

The gross sample size was 4,029 persons, set to meet demands for minimum effective sample size of both the cross-sectional and the longitudinal components.

#### 2.1.5 Sample selection schemes

The sample plan for EU-SILC is a simple random sample in one step, and no upper age limit.

**2.1.6 Sample distribution over time**

The sample is a rotating panel sample of approximately 4,000<sup>1</sup> individuals originally selected by simple random sampling from the national register in the end of the year 2004. The sample is divided into four rotation groups of approximately 1,000 individuals, each of which is replaced by another 1,000 participants every successive year.

**2.1.7 Renewal of sample: Rotational groups**

The households of the selected respondents are the household units. Each person (and respective household) drawn remains in the sample for four years and rotates as shown in table 2.1.

**Table 2.1 Rotation of waves in the Icelandic SILC survey**

Year t		t+1		t+2		t+3	
Wave number	Number in sample						
1	1.000	1	1.000	1	1.000	1	1.000
2	1.000	2	1.000	2	1.000	2	1.000
3	1.000	3	1.000	3	1.000	3	1.000
4	1.000	4	1.000	4	1.000	4	1.000

- Notes:
-  Those drawn new in sample year t
  -  Those drawn new in sample year t-1
  -  Those drawn new in sample year t-2
  -  Those drawn new in sample year t-3
  
  -  Those drawn new in sample year t+1
  -  Those drawn new in sample year t+2
  -  Those drawn new in sample year t+3

Persons 16 years of age are added to the sample every year in order to make up for the aging of the sample. Those who were 16 years old in 2004 are 20 years old in 2008 and therefore there is need to add 16 year old persons to the sample every year. The gross number in the sample increases with those supplements.

**2.1.8. Weighting**

**2.1.8.1 Design factor**

The probability of a household being selected is equal to the number of persons aged 16 and older in the household. The weight for households and for all adult household members is the inverse of the number of adult household members as calculated in **DB080**, the household design weight:

$$DB080 = \frac{1}{n_{16+}}$$

Where  
n<sub>16+</sub> = number of persons age 16+ in the respondents households

<sup>1</sup> 4.000 in the year 2004 when the survey starts but in four years the gross sample will be appr. 4,160

### 2.1.8.2 Nonresponse adjustments

Post stratification weights are used to adjust the data to the population. The information on the population comes from the national register. The weights both adjust for nonresponse and sampling error. The post stratification weights are based on age (14 groups total, 12 groups for 16 and older and 2 groups below 16), sex and residence (2 groups).

### 2.1.8.3 Adjustments to external data

Results are only calibrated with numbers from the national register as described above.

**PB060** is the personal cross-sectional weight for selected respondent:

$$PB060 = \frac{N(kba)}{n(kba)}$$

Where

N = Population 16 years and older 31. December 2007 in private homes

n = number of cases in the data base

k = sex b = residence (capital area and other areas)

a = age groups [16-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-66, 67-79, 80+]

Originally the household cross-sectional weight (**DB090**) was calculated as shown below:

$$DB090 = DB080 * PB060 = \frac{1}{n16+} * \frac{N(kba)}{n(kba)}$$

Where

N = Population 16 years and older 31. December 2007 in private homes

n = number of cases in the data base

k = sex b = residence (capital area and other areas)

a = age groups [16-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-66, 67-79, 80+]

Integrative calibration is applied using the software G-Calib (designed by Statistics Belgium). The original values of **DB090** are replaced by calibrated values. The calibrated values of **DB090** are also assigned to **RB050** in order to assign identical weight to all members of the same household. Integrative calibration takes into account the distribution of the population according to age, sex and residence as described above.

The personal cross-sectional weight **PB040** is equal to **RB050**.

The personal design weight for selected respondent **PB070** is calculated in a similar way as **PB060** except **PB070** applies to the selected sample while **PB060** applies to respondents only.

$$PB070 = \frac{N(kba)}{s(kba)}$$

Where

N = Population 16 years and older 31. December 2007 in private households

s = number of selected respondents

k = sex b = residence (capital area and other areas)

a = age groups [16-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-66, 67-79, 80+]

The children cross-sectional weight **RL070** is calculated with the number of children in each one-year group (0-12 years) in private households in the population divided by the number of children in one-year groups in the households interviewed:

$$RL070 = \frac{BA}{ba}$$

Where

BA = population 0-12 years of age 31. December 2007 in private households

b = number of children 0-12 years old in the respondents' households

a = age groups [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]

#### **2.1.8.4 Final Cross sectional weight:**

The final cross sectional weight is described in section 2.1.8.1 to 2.1.8.3 above

#### **2.1.9 Substitutions**

No substitutions were applied.

## **2.2 Sampling errors**

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

Standard errors for the cross sectional indicators were calculated in the software R, using households as clusters. The standard errors are shown in table 1.

There were 4.029 persons in the 2008 sample. During the field period, 90 of these proved to be non-eligible (either deceased, living in institutions or emigrated), thus giving a net sample of 3939 persons. Interviews were completed for 2.887 of them.

**Table 2.2.1.A The mean, the total number of observations and the standard errors for the following income components (unweighted data)**

	Mean	Count	Valid	
			N	SE
Total HH gross inc (HY010)	8.685.356	2.887	2886	126.797
Total HH disp. Inc (HY020)	6.329.045	2.887	2886	95.036
Total HH disp before (HY022)	5.955.350	2.887	2886	96.425
Total HH disp. Including (HY023)	5.380.564	2.887	2886	99.885
Gross Imputed rent (HY030)	929.959	2.887	2887	10.954
Gross Income from rental (HY040)	48.084	2.887	2886	5.180
Gross income from investments (HY090)	691.173	2.887	2886	71.033
Gross family allowances (HY050)	139.059	2.887	2886	6.602
Gross social excl. (HY060)	6.381	2.887	2886	1.183
Gross housing allowances (HY070)	59.292	2.887	2886	3.954
Gross inter-HH cash received (HY080)	71.263	2.887	2807	3.817
Alemonies received (HY081G)	63.091	2.887	2837	3.496
Gross interest repayments (HY100)	438.640	2.887	2886	8.713
Gross Income under 16 (HY110)	19.685	2.887	2886	1.796
Gross taxes on wealth (HY120)	71.057	2.887	2886	758
Gross inter-HH cash paid (HY130)	55.775	2.887	2808	3.083
Alemonies paid (HY131)	37.571	2.887	2852	2.423
Gross tax on income (HY140)	2.229.480	2.887	2886	37.651
Gross employee cash income (PY010)	2.844.616	6.618	6618	39.521
Gross Non-Cash employee income (PY020)	58.307	6.618	6507	6.081
Gross company car (PY021)	42.703	6.618	6551	2.284
Gross employer's social insurance contribution (PY030)	362.455	6.618	6618	4.963
Gross contributions to individual private pension plans	74.772	6.618	6618	14.066
Gross self employment (PY050)	124.565	6.618	6618	8.187
Gross unemployment benefits (HY090)	5.602	6.618	6618	779
Gross old-age benefits (PY100)	212.357	6.618	6618	8.456
Gross survivor benefits (PY110)	38.298	6.618	6618	6.171
Gross sickness benefits (PY120)	782	6.618	6618	545
Gross disability benefits (PY130)	60.815	6.618	6618	4.261
Gross education allowances (PY140)	6.483	6.618	6618	2.504

**Table 2.2.1.B The mean, the number of observations and the standard error for the equivalised disposable income breakdown by sex, age groups and household size (unweighted data)**

Equivalised disposable income	Mean	Before imp	After imp	Standard error
1 household member	2.530.637	422	421	74.584
2 household members	3.513.177	1.658	1.658	58.541
3 household members	3.476.250	1.776	1.776	62.261
4+ household	3.351.062	4.788	4.788	33.555

members				
<25 years	3.207.635	3.387	3.387	39.507
25-34 years	3.167.816	1.062	1.062	54.100
35-44 years	3.383.891	1.160	1.159	84.196
45-54 years	3.738.615	1.324	1.324	64.022
55-64 years	4.007.768	877	877	83.570
65+ years	2.987.085	804	804	85.118
Male	3.389.575	4.374	4.373	36.149
Female	3.345.746	4.270	4.270	36.126

Standard errors for table 2.2.1.A and 2.2.1.B are calculated based on the assumption of a simple random sample as we do not have resources take the design of the survey and the calibration into account

## **2.3 Nonsampling errors**

Errors other than sampling errors can be placed in three categories: coverage errors, nonresponse errors and measurement errors.

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

The sampling frame is the population register of Iceland in the end of the year 2007. Eligible for the sample were all persons 16 and older who were living in Iceland according to the register. Those registered at institutions were excluded from the sample.

The national register is updated continuously. However, it does not always contain correct information on changing of residence. People may move abroad or to an institution without giving that information to the national register. Therefore the national register over represents young people who tend to go abroad for their studies and older people who sometimes maintain a private address in spite of living in an institution.

This is adjusted for with information received during the data collection process. For instance if it turns out that 5% of 25-29 years old females from the capital area are living abroad in spite of being in the register then the population frame is adjusted to these information and the relevant group is decreased by 5%. These adjustments are made before calculating the post stratification weights.

Under coverage of foreign citizens who live in Iceland is possible but it can be hard to assess. However it is likely that most foreign citizens who live here are working legally and are therefore in the national register. The fact that Iceland is an island makes it hard for foreigners to enter and stay in the country without being registered.

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

Errors of this kind can be classified into three categories: Design errors, interviewer errors and processing errors.

#### **2.3.2.1 Design errors**

The questionnaire may be the cause of measurement errors. The phrasing of questions can cause misunderstanding as can the ordering of questions affect responses. The work of designing the survey electronically in Blaise also leaves room for errors.

Here are some comments on those variables and other cases where there might be deviations from Eurostat standards.

#### HB100 and PB120

Timestamps were not included in the Blaise instrument of the survey for 2004, 2005 and 2006 and therefore it could not be seen how long each of the personal- and the household section took. Only information on the total length of the interview was available. This was improved before the 2007 survey.

#### HS040

The Icelandic question differs because of the uniqueness of Iceland as an island. We asked if the respondent and his family could afford to go on a vacation abroad for one week. We also asked if the household could go on one week vacation in Iceland for one week.

#### PH030

In 2004, 2005 and 2006 it was assumed that all those with long standing illness or condition were limited in their activities. This was fixed in 2007 when all respondents received questions about limitation in activities.

#### PL030

In 2004 and 2005 the labour market definition of economic status was used for PL030 instead of the requested self defined economic status. This was fixed before the 2006 survey.

#### PL130

For those who were self employed a question was not asked in 2004, 2005 and 2006 on the number working at the local unit. This was fixed before the 2007 survey.

#### PL140

For those who were retired the question on the type of contract was not asked in 2004, 2005 and 2006 but was included in the 2007 survey.

#### PL190

A question on the year of beginning first regular job was not in the survey for 2004, 2005 and 2006 but was included before the 2007 survey.

#### PL200

A question on the number of years in paid work was not in the survey for 2004, 2005 and 2006 but was included before the 2007 survey.

#### PL210A-PL210L

In 2004, 2005 and 2006, there was only received information on the number of months for each type of economic status but not for which month each status applied. This error was fixed in the 2007 survey.

The following longitudinal variables were not collected in the years 2004, 2005 and 2006. They were included in the survey for 2007.

RB120 Moved to

RB140 Month moved out or died

RB160 Number of months in household during the income reference period

RB180 Month moved in

The fact that income variables are mostly collected from registers should reduce the risk of measurement errors in the income variables. Wrong estimation from respondents or error in data entering from interviewer should not be a problem.

### 2.3.2.2. Interviewer and processing errors

The data collection mode in the Iceland EU-SILC is CATI, using the software Blaise. Data entry controls are built into the electronic questionnaire.

Once the data has been collected all processing is done in the SQL data management software, except for imputations which are done in SPSS.

Registers are used quite extensively in the EU SILC in Iceland. The result should be a decrease in measurement error from respondents or interviewers. However there still room for human error in data process as complexities are added to the data processing with linking between survey data and public records or other outside data. The following sources of data are used: the national register, tax register, real estate register, HBS (Household budgeted survey) data, municipality tax data and list of people living in institutions.

### 2.3.3. Nonresponse errors

In general, males are more difficult to reach than females and young people are harder to reach than older people. People living in the capital region are more often absent from home than people elsewhere in Iceland.

Refusals to participate in the survey are more prevalent among inhabitants of the capital city region and older persons. In contrast, women, people outside the capital city region and young people are less likely to refuse to participate.

To counter bias, the results were weighted by sex, age and residence.

#### 2.3.3.1. Achieved sample size

	Households (HH)	Persons 16+	HH members
2005	794	1855	2432
2006	707	1608	2099
2007	678	1542	1986
2008	708	1613	2127
	2887	6618	8644

#### 2.3.3.2. Unit nonresponse

##### Household nonresponse rates (NRh)

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

Where

$$Ra = \frac{\text{Number of addresses successfully contacted}}{\text{Number of valid addresses selected}}$$

$$Ra = \frac{\sum (DB120 = 11)}{\sum (DB120 = all) - \sum (DB120 = 23)} = \frac{3939}{4029 - 90} = 1$$

$$Rh = \frac{\text{Number of household interviews completed and accepted for database}}{\text{Number of valid addresses selected}}$$

$$Rh = \frac{\sum (DB130 = 11)}{\sum (DB130 = all)} = \frac{2887}{3939} = 0.733$$

$$NRh = (1 - 0.733) * 100 = 26.7$$

### Individual nonresponse rates (NRp)

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

#### Where

$$Rp = \frac{\text{Number of personal interviews completed}}{\text{Number of eligible individuals in households where interviews were completed and accepted for database}}$$

$$Rp = \frac{6618}{6618} = 1$$

$$NRp = 1 - (1 - (Rp)) * 100 = 1 - (0) * 100 = 100$$

### Overall individual nonresponse rates (\*NRp)

$$*NRp = (1 - (Ra * Rh * Rp)) * 100 = (1 - (1 * 0.267 * 1)) * 100 = 73.3$$

#### 2.3.3.3 Distribution of households

**Table 2.3.3.3.A Distribution of households by 'record of contact address' (DB120)**

	Rot 1	Rot 2	Rot 3	Rot 4	Total
11 Contacted	1051	966	955	967	3939
Does not					
23 exist	22	22	23	23	90
Total	1073	988	978	990	4029

**Table 2.3.3.3.B Distribution of households by 'household questionnaire result' (DB130)**

	Rot 1	Rot 2	Rot 3	Rot 4	Total
11 Completed	794	707	678	708	2887
21 Refusal	141	158	158	161	618
Temporarily					
22 away	99	82	109	86	376
Unable to					
23 respond	12	14	9	10	45
24 Other reasons	5	5	1	2	13
Total	1051	966	955	967	3939

**Table 2.3.3.3.C Distribution of households by 'household interview acceptance' (DB135)**

	Rot 1	Rot 2	Rot 3	Rot 4	Total
Accepted	794	707	678	708	2887

Rejected	0	0	0	0	0
Total	794	707	678	708	2887

Respondents for whom we could not retrieve social ID numbers were excluded from the data as well as the households they belong to. They are the “other reasons” in table 2.3.3.3. B. Absence of social ID number means that it is impossible to connect the survey data to the tax register which means that all the income variables will be empty (or 0) for these individuals which can greatly affect the equivalised disposable income of the households. This was further justified by the fact that only about 1% of the households was taken out, all of which had underestimated equivalised disposable income since an “income less” person was living there.

#### **2.3.3.4. Distribution of substituted units**

Not applicable as no substitutions are applied.

#### **2.3.3.5. Item nonresponse**

For cost or income related variables imputation was used to treat item nonresponse.

Item nonresponse is not assumed to be in the income variables that come from registers. The only income variables where imputation was applied were the ones not received from registers, “regular inter-household cash transfer received” and “regular inter-household cash transfer paid” (HY080G and HY130G). Imputations were used for those variables based on survey data.

For HY080G and HY130G a question was added in 2007 for those not knowing the amount paid for alimony asking for the number of children for whom alimony was paid or received. This was done in order to help with imputation.

HH060: When indicating that the household was paying a non-zero amount for rent but not giving the amount imputation was applied. Variables used were area of residence, number of household members, number of rooms in the dwelling and the type of owner of the dwelling (profit – non-profit). This was done for all years 2004, 2005 and 2006 and files with imputed data were delivered to Eurostat back in time for 2004 and 2005.

A follow up question was added before the 2007 survey in case of “don’t know” to decrease item nonresponse for HH060.

HH061: There has always been high item nonresponse for the question of imputed rent in Iceland. One reason is the small rental market in Iceland. This becomes especially difficult in smaller towns where it might be hard to say whether certain houses could be rented at all no matter how low the rent would be. To treat this problem we added a follow up question for the 2007 survey encouraging respondents to give their best estimate if they said “don’t know”.

HS130: The question on the lowest monthly income to make ends meet has had high levels of item nonresponse and a follow up question was added to the questionnaire before the 2007 survey to try to reduce that.

PE030: In some cases people had difficulties giving an answer about the year of highest level of education on other household members. We added a follow up question asking to give their best guess.

PL060: Number of working hours was imputed for in 2006. If the respondent had reported working hours on earlier waves and was holding the same job the last value given was used. Otherwise when respondent was working but did not give number of hours, regression analysis was used with the variables: personal income, sex, age and whether the respondent claimed to work full time or part time. This was done for all years 2004, 2005 and 2006 and files with imputed data were delivered to Eurostat back in time for 2004 and 2005.

**Table 2.3.3.5 Number receiving an amount and item nonresponse for the following income components**

	%		
	received	%missing	% partial
Total HH gross inc (HY010)	99,98	0,02	0,00
Total HH disp. Inc (HY020)	99,98	0,02	0,00
Total HH disp before (HY022)	99,98	0,02	0,00
Total HH disp. Including (HY023)	99,98	0,02	0,00
Gross imputed rent (HY030)	90,87	9,13	0,00
Gross Income from rental (HY040)	7,43	92,57	0,00
Gross income from investments (HY090)	74,19	25,81	0,00
Gross family allowances (HY050)	43,67	56,33	0,00
Gross social excl. (HY060)	1,92	98,08	0,00
Gross housing allowances (HY070)	31,72	68,28	0,00
Gross inter-HH cash received (HY080)	16,39	83,61	0,00
Alemonies received (HY081)	14,84	85,16	0,00
Gross interest repayments (HY100)	75,91	24,09	0,00
Gross Income under 16 (HY110)	14,26	85,74	0,00
Gross taxes on wealth (HY120)	89,59	10,41	0,00
Gross inter-HH cash paid (HY130)	14,91	85,09	0,00
Alemonies paid (HY131)	9,22	90,78	0,00
Gross tax on income (HY140)	99,94	0,06	0,00
Gross employee cash income (PY010)	83,38	16,62	0,00
Gross non-cash income (PY020)	30,10	69,90	0,00
Gross company car (HY021)	8,75	91,25	0,00
Gr. employer's soc. Ins. contrib. (PY030)	83,42	16,58	0,00
Gr. contrib. to ind. pension plans (PY035)	2,77	97,23	0,00
Gross self employment (PY050)	10,21	89,79	0,00
Gross unemployment benefits (HY090)	1,51	98,49	0,00
Gross old-age benefits (PY100)	11,88	88,12	0,00
Gross survivor benefits (PY110)	5,24	94,76	0,00
Gross sickness benefits (PY120)	0,08	99,92	0,00
Gross disability benefits (PY130)	4,62	95,38	0,00
Gross education allowances (PY140)	2,02	97,98	0,00

**Table 2.3.3.6 Total item nonresponse and number of observations**

	Valid N	nonresp
Males	3351	1
Females	3266	0
Employed	4800	0
Unemployed	46	0
Inactive	1306	1
Under 25	1391	0
25-34	1062	0
35-44	1159	1
45-54	1324	0
55-64	877	0
65+	804	0
Owner	6014	0
Tenant	603	1
Male under 25	758	0
Male 25-34	539	0
Male 35-44	567	1
Male 45-54	643	0
Male 55-64	458	0
Male 65+	386	0
Female under 25	633	0
Female 25-34	523	0
Female 35-44	592	0
Female 45-54	681	0
Female 55-64	419	0
Female 65+	418	0
Male employed	2553	0
Male unemployed	24	0
Male inactive	539	1
Female employed	2247	0
Female unemployed	22	0
Female inactive	767	0
One person under 64 years	268	1
One person, 65 years or older	153	0
One person male	203	1
One person female	218	0
One person total	421	1
Two adults under 65 no dependent children	890	0
Two adults, no dependent children	618	0
Other, no dependent children	728	0
Single parent, one or more dependent child	222	0
Two adults , 1 dependent child	853	0
Two adults, 2 dependent children	959	0
Two adults, 3 or more dependent children	804	0
Other households with dependent children	1091	0
Households without dependent children	2657	1
Households with dependent children	3929	0

### 2.3.3.6 Total item nonresponse for equivalized disposable income

The information for the income variables were mainly collected through registers. Only information for HY080 and HY130 was received from the tax register. Nonresponse for each income variable is shown in table 2.3.3.5.

If the social ID number was not received for a household member in the interview the household was not included in the data. Therefore we were able to link all household members of all the households to the tax register. Item nonresponse for the equivalized disposable income is therefore only partial where the information were missing for HY080 and HY130 as shown in table 2.3.3.5.

## 2.4. Mode of data collection

All interviews were done through telephone with the aid of the Blaise software. One week before the start of data collection Statistics Iceland sent a letter to the sampled individuals explaining the purpose of the survey and requesting their cooperation.

Instead of asking about the amounts paid for electricity and heat (which are a part of variable HH070, Total Housing cost) imputations are used based on the HBS (Household Budget Survey). The reason is that it is our belief that people often do not know the amounts they pay for heating and electricity. These bills are often paid automatically through credit cards or automatically taken out of peoples' bank accounts. Some people hardly ever see the bills. Length of the intervals the amounts apply to have also sometimes been hard to establish (1 month, 3 months ect). The HBS (Household budget survey) on the other hand is a face to face survey where the respondents are asked in advance to prepare by keeping bills or bank transcripts handy.

The distribution of the selected respondents, household members aged 16 or over, and non-selected household members by data status (RB250) and by type of interview (RB260) is shown in the tables below.

**Table 2.4 A Distribution of household members age 16 or over by data status (RB250)**

Rot. Group	Data status	Sel_resp	Non_sel	All hmembers 16+
1	Only registers (12) Registers and interview (13)	0 794	15 1046	15 1840
2	Only registers (12) Registers and interview (13)	0 707	9 892	9 1599
3	Only registers (12) Registers and interview (13)	0 678	5 859	5 1537
4	Only registers (12) Registers and interview (13)	0 708	4 901	4 1609
Total		2887	3731	6618

**Table 2.4 B Distribution of household members age 16 or over by type of interview (RB260)**

Rot. Group	Type of interview	Sel_resp	Non_sel	All hhmembers 16+
1	CATI (3)	794	1046	1840
2	CATI (3)	707	892	1599
3	CATI (3)	678	859	1537
4	CATI (3)	708	901	1609
Total		2887	3698	6585

## **2.5. Interview duration**

The mean duration of the personal interview (PB120) was 19 minutes and 35 seconds and the mean duration of the household interview (HB100) was 11 minutes and 47 seconds. The mean duration of the total interview was 31 minutes and 22 seconds per average.

## **3. Comparability**

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

#### The reference population

The reference population is persons aged 16 years or more at December 31st in the year 2007, living in private households.

#### The private household definition

A private household is defined as individuals that share food, meaning that they either do not pay for their food or that they share expenses for food. The definition does not require that they eat at the same times or that they are related.

#### The household membership

Persons are considered as household members if they spend most of their nights at the address of the household.

Individuals that are temporarily away (not having a private address elsewhere) and will return to the household are considered as household members. As example of this are children in boarding schools, fishermen, individuals admitted to hospitals or imprisoned and those that are working for longer periods away from home.

#### The income reference period

The income reference period is the calendar year 2007.

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

The period for taxes on income and social insurance contributions is the calendar year 2007.

#### The reference period for taxes on wealth

The reference period for taxes on wealth is the calendar year 2007.

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

The income variables are collected from registers and the interval between the end of the income reference period and the time of interview for current variables is maximum four and a half months.

The total duration of the data collection of the sample

The interviews were carried out between 19<sup>th</sup> of February and 6<sup>th</sup> of April 2008.

Basic information on activity status during the income reference period

**Table 3.1 Activity status of persons 18 years or older**

	N	%
1 Working	4800	76,45
2 Unemployed	46	0,73
3 Retired	767	12,22
4 Other inactive	540	8,60
9 Not responded	126	2,01
Total	6279	100,00

## **3.2. Components of income**

**3.2.1 Differences between the national definitions and standard EU-SILC definitions, and an assessment of the consequences of the differences mentioned will be reported for the following target variables.**

This section gives an overview of how income data from registers have been organised in order to be comparable to the income concepts outlined in the SILC guidelines. In addition references are made to any departures from these guidelines.

All income data derived from registers are recorded gross at component level. All income data are collected at the individual level (i.e. the person registered as the receiver of the income). This also concerns typically “household” related incomes such as housing benefits and social assistance.

Total household gross income (HY010)

The sum of all income components:

HY040G+HY050G+HY060G+HY070G+HY080G+HY090G+HY110

Plus the sum for all household members of:

PY010G+PY020G+PY021G+PY050G+PY090G+PY100G+PY110G+PY120G+PY130G+PY140G.

Total disposable household income (HY020)

Defined as total gross income (HY100G+HY130G+HY140G) minus (HY120G+HY130G+HY140G)

Total disposable household income before social transfers except old-age and survivor's benefits (HY022)

Defined as HY020 minus the sum for all household members of:

(PY090N+PY120N+PY130N+PY140N) + HY050N+HY060N+HY070N

Total disposable household income before social transfers including old-age and survivor's benefits (HY023)

Defined as HY020 minus the sum for all household members of:

(PY090N+PY100N+PY110N+PY120N+PY130N+PY140N) + HY050N+HY060N+HY070N

Income from rental of property or land (HY040)

Income from hiring out property not contacted to business activity. Deviates from SILC definitions in that no information is available in the register on interest repayments, maintenance, insurance and other charges.

Family/children-related allowances (HY050)

Includes the following income components:

- Family allowance
- Maternity allowance (birth grant)
- Single parent's allowance

Social assistance (HY060)

Includes the total amount received in social assistance.

Housing allowances (HY070)

Includes rent benefits granted to tenants and owners.

Regular inter-household cash transfers received - (HY080)

Includes alimonies received. Information on regular private cash support received by children from parents living in a separate household is included from interview. The same goes for other inter household cash transfers received.

Interest, dividends, profit from capital investment in unincorporated business (HY090):

Interest and dividends are taxable income.

Income received by people aged under 16 (HY110)

Includes the following income components:

- Interests and dividends.

Those are registered in one sum on parent's tax return. If more than one child is in the household it is divided equally between the children.

- Children with income.

Interest repayments on mortgage (HY100)

As interest repayments on mortgage are used for calculating fiscal benefits to owner-occupiers are to be found in registers.

Regular taxes on wealth (HY120)

As the taxes are paid in the following year information is sought in registers from the year before.

Regular inter-household cash transfers paid (HY130)

Information on alimonies paid and regular private cash support to children from parents living in a separate household is included from interview. The same goes for other inter household cash transfers received.

Total Tax on income and social contribution (HY140)

It includes assessed income, wealth taxes and social contributions.

Repayment/receipts for tax adjustment (HY145)

It is included in HY140.

Employee cash or near cash income (PY010)

Deviation from the SILC concept:

It is not possible to separate from employee cash income redundancy compensations that should be included under unemployment benefits. The same goes for wages and salaries during sickness, which is a major part of sickness benefits paid in Iceland.

#### Cash benefits or losses from self-employment (PY050)

Entrepreneurial income is collected *net* in register data. Royalties are registered as “other income” and not possible to separate and not include here.

#### Unemployment benefits (PY090)

Deviation from the SILC concept:

It is not possible to separate from employee cash income (PY010) redundancy compensations that should be included here or in PY100.

#### Old-age function (PY100)

Includes the following income components:

- Old age pension from social security scheme (basic pension).
- Old age pension from compulsory private pension funds (employment pension).

#### Survivors' function (PY110)

Includes the following income components:

- Survivors' pension from social security scheme.
- Survivors' pension from compulsory private pension funds.
- Death grants.

#### Social benefits in the sickness (PY120)

All sickness benefits that are included in wages and salaries cannot be specified in registers and are included in PY010.

#### Disability benefits (PY130):

Includes the following income components:

- Disability benefits and pension from social security scheme (basic pension).
- Disability benefits and pension from compulsory private pension funds (employment pension).

#### Education related allowance (PY140)

It includes scholarship of various kinds and “educational alimony” received by children at the age of 18 to 20 years living with single parent (e.g. students).

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

Tax register is use for all income variables except for HY080 and HY130 (Regular inter-household cash transfer received and paid). For those two variables information are collected through the interview. Those are also the only income variables where imputation was used.

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

The register data only report gross income at component level. Total assessed taxes and contributions to social security are collected separately from tax registers.

### **3.2.4. The method used for obtaining income target variables in the required form (i.e. as gross values)**

All income data are recorded gross at component level.

## 4. Coherence

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

With the exception of inter-household transfers all the income data in SILC are from register. Hence, in our opinion, there is no point in comparing the results with external sources since the source we would compare with is the source used in SILC.

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