

**Intermediate Quality Report for the Swedish EU-SILC,
The 2007 cross-sectional component**

Statistics Sweden

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1. Common cross-component European Union indicators based on the cross-component of EU-SILC 2007

The Swedish EU-SILC 2007 cross-sectional has been carried during 2007 over all the twelve months as an integrated part of the Swedish survey of living conditions (ULF) now EU-ULF. The total micro data transmitted to Eurostat contain all 2007 cross-sectional indicators stipulated in the regulation. These EU-SILC indicators, which are included in this intermediate quality report 2007 are covered by these data.

1.1 Cross – component indicators EU-SILC 2007

Table 1. At-risk-of-poverty rate after social transfers, broken down by age and gender.

sex	Age	
Both	Total	11
	< 18 years	12
	>18 years < 64 years	10
	> 65 years	11
male	Total	11
	>18 years < 64 years	11
	> 65 years	7
female	Total	11
	>18 years < 64 years	10
	> 65 years	14

Table 1.2. At-risk-of-poverty rate after social transfers, broken down by most frequent activity status and gender.

Sex	Working status	
Both	Total population	
	Employment	7
	Non employment	16
	Unemployment	26
	Retired	11
	Inactive population -	32

	Other	
Male	Total population	
	Employment	7
	Non employment	15
	Unemployment	32
	Retired	8
	Inactive population - Other	35
Female	Total population	
	Employment	6
	Non employment	17
	Unemployment	19
	Retired	13
	Inactive population - Other	29

Table 1.3 At- risk- of- poverty rate after social transfers, broken down by household types.

Household type	
Total	11
Single female	20
Single male	22
2 adults younger than 65 years	7
2 adults, at least one aged 65 years and over	5
2 adults with 1 dependent child	6
2 adults with 2 dependent children	6
2 adults with 3 or more dependent children	13
3 or more adults	7
3 or more adults with dependent children	6
Households without dependent children	12
Households with dependent children	10
1 adult younger than 64 years	23
1 adult older than 65 years	18
Single parent with dependent children	24

Table 1.4 At- risk- of- poverty rate after social transfers, broken down by accommodation tenure status and gender.

Status	Gender	
Owner	both	6
	male	6
	female	7
Rent	both	20
	Male	21
	female	20

Table 1.5 At- risk- of- poverty rate after social transfers, broken down by work intensity of the household.

Work intensity (WI)	Household type	
Household with WI = 0	Households without dependent children	18
	Households with dependent children	59
Household with $0 < WI < 1$	Households without dependent children	12
	Households with dependent children	33
Household with WI = 1	Households without dependent children	7
	Households with dependent children	5

Table 1.6 At- risk- of- poverty threshold (euros)

Single person	11 206
Two adults with two children younger than 14 years	23 533

Table 1.7 Inequality of income distribution S80/20 ratio.

Total	3,3
Males	3,6
Females	3,4

Table 1.6 Relative median at-risk-of-poverty gap broken down by gender (%).

Total		20
Males		22
Females		18

Table 1.7 Dispersion around the risk- of- poverty threshold.

	At risk of poverty rate (cut-off point: 40% of median)	At risk of poverty rate (cut-off point: 50% of median)	At risk of poverty rate (cut-off point: 70% of median)
Total	3	6	19
Males	4	6	17
Females	3	6	20

Table 1.8 At-risk-of-poverty-rates before social transfers except old age and survivors benefits.

Sex	Age		
Both	Total		28
	< 18 years		34
	>18 years < 64 years		27
	> 65 years		22
Male	Total		26
	>18 years < 64 years		27
	> 65 years		12
female	Total		30
	>18 years < 64 years		28
	> 65 years		30

Table 1.9 At-risk-of-poverty-rates before social transfers including old age and survivors benefits.

Sex	Age	
Both	Total	4135
	< 18 years	35
	>18 years < 64 years	30
	> 65 years	93
Male	Total	39
	>18 years < 64 years	28
	> 65 years	90
Female	Total	44
	>18 years < 64 years	31
	> 65 years	94

Table 1.10 Inequality of income distribution Gini Coefficient.

Gini coefficient.	23
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1.2 Others indicators

1.2.1 Equivalised disposable income :

Equivalised disposable Income	S.kr. Mean
By household size	
1 household member	308 149
2 household members	351 994
3 household members	286 063
4 and more household members	235 060
By age groups	
< 25	220 649
25 - 34	325 046
35 - 44	390 567
45 - 54	371 692
55 - 64	378 374
65 +	279 175
By sex	
Male	333 216
Female	320 052
Total	326 407

1.2.2 The unadjusted gender pay gap

The calculation of unadjusted gender pay gap is based on other sources than EU-SILC (wage statistics).

2. Accuracy

2.1 Sample design

2.1 Type of sample design

Every year a systematic sample is drawn from the register of total population (TPR). This is sorted by age and covers the entire population according to the national registration. Such sample is regarded as simple random sample. During 2007 the sample was drawn in September 2006 and consisted of four panels, panel 4 to 7. Panel 4 was originally drawn in 2004 and every year complemented with people who had grown into the population (new 16 aged and immigrants). Most of the respondents were answering for the 4th time. In the same manner panel 5 and panel 6 were originally drawn in 2005 and 2006 and complemented. Panel 7 was included for the first time 2007.

2.1.2 Sample unit

According to EU-SILC definitions the units of study of interest are both the household and the individuals or household member living in the same household as the selected person.

2.1.3 Stratification and sub-stratification criteria

No stratification was applied in the sampling procedure.

2.1.4 Sample size (households=selected persons).

Table 2.1 Sample size EU-SILC 2007

	Total	
Respondent	7183	72,4%
Not found	1195	12,0%
Refused	1416	14,3%
Over-coverage	126	1,3%
Total	9920	100,0%

2.1.5 Sample Selection

The sample was drawn as a systematic sample from the frame sorted by age order.

2.1.6 Sample distribution over time

During 2007 the sample was drawn in September 2006 and consisted of four panels, panel 4 to 7. Panel 4 was originally drawn in 2004 and every year complemented with people who had grown into the population (new 16 aged and immigrants).

2.1.7 Renewal of sample: Rotation groups

The sample consists of four rotation groups (panels) as described above in 2.1.

2.1.8 Weightings – Design factor and non-response adjustment

2.1.8.1 Design factor

For the estimation procedure the sample from each panel is divided into 2 x 8 strata by sex and age-groups. Post-stratification refers to sex, age 16-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75-84 and 84+ years.

Within each post strata the design-weights are computed as the inverse of the probability of inclusion after that the design-weights are adjusted according to the over-coverage.

2.1.8.2 Non-response adjustment

The final cross sectional weight are computed as the adjusted population-size in each post strata divided by the number of respondents for each panel and finally divided by 4.

2.1.8.3 Adjustment to external data

From the register of total population we compute the number of individuals and the number of households according to married people within each stratum when the sample was draw. We have non possibilities to calibrate with external data

2.1.8.4 Final cross sectional weight

2.1.9 Substitutions

Substitution has not been applied.

2.1.9.1 n.a

2.1.9.2 n.a

2.1.9.3 n.a

2.2 Sampling errors

Sampling errors refers to the variability of estimates in the random sample. The guidelines of the QR ask reporting on the effective sample size and the standard errors of the common tree cross component indicators and for equivalised disposable income. (gender pay gap is not applicable)

Table 2.2. 1a At-risk-of-poverty rate after social transfers, broken down by age and gender

–Value, achieved sample size and standard error–

sex	Age		Achieved sample size	Standar error
Both	Total	11	18126	0,23
	< 18 years	12	4789	0,47
	>18 years	10	11040	0,29
	> 65 years	11	2297	0,65
male	Total	11	9061	0,33
	>18 years	11	5518	0,42
	> 65 years	7	1111	0,77
female	Total	11	9065	0,33
	>18 years	10	5522	0,40
	> 65 years	14	1186	1,01

Table 2.2.1b At-risk-of-poverty rate after social transfers, broken down by most frequent activity status and gender.

–Value, achieved sample size and standard errors–

Sex	Working status		Achieved sample size	Standard error
Both	Total population	11	18126	0,23
	Employment	7	8613	0,27
	Non employment	16	4447	0,55
	Unemployment	26	315	2,47
	Retired	11	2991	0,57
	Inactive population -	32	1141	1,38
Male	Total population	11	9061	0,33
	Employment	7	4450	0,38
	Non employment	15	2024	0,79
	Unemployment	32	156	3,73
	Retired	8	1388	0,73
	Inactive population -	35	480	2,18
Female	Total population	11	9065	0,33
	Employment	6	4163	0,37
	Non employment	17	2423	0,76
	Unemployment	19	159	3,11
	Retired	13	1603	0,84
	Inactive population -	29	661	1,76

Table 2.2.1c At- risk- of- poverty rate after social transfers, broken down by household types.

–Value, achieved sample size and standard errors–

Household		Achieved sample size	Standar error
Total	11	17362	0,24
Single female	20	872	1,35
Single male	22	767	1,50
2 adults younger than 65 years	7	3140	0,46
2 adults, at least one aged 65 years and over	5	1926	0,50
2 adults with 1 dependent child	6	2127	0,51
2 adults with 2 dependent children	6	3716	0,39
2 adults with 3 or more dependent children	13	2127	0,73
3 or more adults	7	675	0,98
3 or more adults with dependent children	6	1135	0,70
Households without dependent children	12	7380	0,38
Households with dependent children	10	9982	0,30
1 adult younger than 64 years	23	1026	1,31
1 adult older than 65 years	18	591	1,58
Single parent with dependent children	24	807	1,50

Table 2.2.1.a Equivalised disposable income

- Value, achieved sample size and standard error

Mean, total number of observations and standard error for equivalised disposable income			
Cross-sectional 2007 (households)			
	Mean S.kr.	Number	Standard error
By household size			
1 household member	308 149	1 800	3 507
2 household members	351 994	4 188	2 840
3 household members	286 063	821	3 287
4 and more household members	235 060	374	4 277
By age groups			
< 25	220 649	953	3 272
25 - 34	325 046	1 043	3 625
35 - 44	390 567	1 281	4 391
45 - 54	371 692	1 162	6 286
55 - 64	378 374	1 212	5 153
65 +	279 175	1 532	3 546
By sex			
Male	333 216	3 532	2 942
Female	320 052	3 651	2 578
Total	326 407	7 183	1 951

2.3 Non-sampling errors

2.3.1 Sampling frame and coverage errors

The sampling frame is the (TRP) Total Population Register of Sweden. TPR is updated more or less every day. The main outlines for organization of population statistics is according to Swedish law, the main rule is that all persons residing in the country shall be registered at the property unit in the parish where they reside.

Since 1 July 1991, local registration functions are performed by the Tax Offices. Between 1686 and 1991, the Parish Offices of the Church of Sweden carried out the local work. A major means of identifying any person is the personal identity number that is assigned to every individual registered in the Population Registration System. The number follows a person from birth to death and is entered in most personal registers in Sweden, making it possible to identify individuals in different administrative materials and collate data. The personal identity number consists of ten digits. The first six digits show the year, month and day of birth. The next three digits are the birth number which is odd for men and even for women. The last digit is a checking digit.

As part of the partial computerization of Sweden's continuous population registration in 1966, Statistics Sweden was granted permission to set up and maintain a register of the entire national population, referred to as the Total Population Register (TPR).

The vital statistics are based on notifications of births, deaths, changes in marital status, and changes in citizenship, internal migration, immigration and emigration. The TPR receives these daily from the Tax Authorities. The notifications relate to the registered population. Thus, vital statistics are based on the National Registration and consequently conform to its concepts and definitions.

Received information is checked mechanically with respect to the validity of the codes and the logical contents of the information and quality tests comprises, among other things, regional codes, connections between age and marital status, etc. Beginning in 1998 the cut-off date is 31 January in the year after the event took place. The change in cut-off date in 1998 has no effect on comparisons between years.

Over-coverage consists of people who have died and people who have left the country but are still registered in Sweden. The sample is drawn several months before the fieldwork start. However a check is

made close to the start (the sample is matched to TPR) and people who have died since the sample was drawn are excluded. People who die after that point are registered by the interviewers.

Over-coverage in terms of people who have left Sweden permanently but are still registered in TPR is more difficult to discover. Recent attempts to estimate the size of this over-coverage have given the figure 35 000. Applied on EU-SILC this means 30 individual of which many are discovered by the interviewers. The error is negligible.

If we regard TPR as our population under-coverage by definition does not exist. There are of course people who reside in Sweden illegally or while waiting for residence permit.

2.3. 2 Measurement and processing errors

2.3.2.1 Measurement errors

The questionnaire: Most of the EU-SILC questions refer to the present, for which memory errors can not constitute a major source of error. But there are questions about frequency during a longer reference period that are more complicated. .

The questions in the EU-SILC protocol are in most cases not very difficult to answer. It is fairly certain that some questions are interpreted differently by different persons. Particular caution should be observed of responses to questions relating to attitudes and frequency in the interpretation.

Interviews training and efficiency: Following a basic introductory course in survey methods, new interviewers participate in an additional one-day course that includes approximately six ours of intensive training (ULF including EU-SILC). The various sections of the interview protocol are thoroughly reviewed and practice in handling as well as certain complicated questions is provided and discussed. The interviewer may miss-understand certain instructions or responses, which contributes to the survey's systematic error level. Each interviewer conducts on average roughly 40 interviews per year. Systematic mistakes by an occasional interviewer may not distort the survey data to any great extent, but it is not possible to specify how much error of that sort occurs. The interviewer's personality and behaviour may influence the responses, particularly with respect to "subjective" questions, such as those relating to attitudes. In some cases interview questions are not presented properly. To the extent that such mistakes cannot subsequently be corrected, there is an increase in partial response.

The respondent may disremember, provide consciously or unconsciously distorted responses or may simply be unable to answer questions.

The mode: The telephone interview mode CATI was the main method use in SILC 2007. The interview form has been specially designed for this type of survey. Telephone interviews whit computer aid CATI is now currently use as the main way to make interviews and to make a test before a half of interviews during 2006 was CATI . Experiments with split samples have been carried out. The results indicate very little difference between the two interview methods. Indirect interviews can be a source of errors. Applied on appropriate questions experience says that indirect interviews can be an efficient method to collect information.

2.3.2.2 Processing errors

Data are checked interactively (values, syntax, logics) as an integrated part of the data entry process. (CAPI/CATI is not applied) followed by the Eurostat control program (after transformation to EU-SILC file format).

All components necessary to derive Gross total income, disposable income etc. are collected from administrative registers. No imputations have been applied for these indicators.

2.3.3 Non-response errors

2.3.3.1 Achieved sample size household and persons. (In Sweden selected person = household).

	Total	
Respondent	7183	72,4%
Not found	1195	12,0%
Refused	1416	14,3%
Over-coverage	126	1,3%
Total	9920	100,0%

2.3.3.2 Unit non response- The original sampled individuals

The panel

	4		5		6		7		Total	
Respondent	1728	73,5%	1696	74,0%	1595	69,2%	2164	72,7%	7183	72,4%
id	264	11,2%	251	11,0%	316	13,7%	364	12,2%	1195	12,0%
Refused	331	14,1%	323	14,1%	368	16,0%	394	13,2%	1416	14,3%
Over-coverage	27	1,1%	21	0,9%	25	1,1%	53	1,8%	126	1,3%
Total	2350	100,0%	2291	100,0%	2304	100,0%	2975	100,0%	9920	100,0%

■ Household non response rate :

Ra 0.9063

Rh 0.8092

$$NRh = (1 - (Ra * Rh)) * 100 = 26.67$$

■ Individual non response rate :

Rp = 100

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

■ -- Overall individual non response rate (*NRp)

n.a - Interview only whit the selected respondent see NRp.

2.3.3.3 Distributions of households = persons (original units) EU-SILC 2007

Respondent	panel				total
	4	5	6	7	
Respons	1728	1696	1595	2164	7183
Not found	264	251	316	364	1195
Refused	331	323	368	394	1416
Over-cov	27	21	25	53	126
Total	2350	2291	2304	2975	9920

2.3.3.3a Distribution of households = individuals by contact at address DB120

Contact at adress		
DB120	frecuency	cumulative
Adress contacted	8876	8876
Adress not located	912	9788
Adrsess unable to access	6	9794
Adress does not exist	123	9920

2.3.3.3b Distribution of households = individuals by questionnaire DB130

Household Quest result		
DB130	Frecuency	cumulative
Quest completed	7183	7183
Refusal to cooperate	1416	8599
Household not found	39	8638
Household unable to respond	207	8845
Others reasons	31	8876

2.3.3.3c Distribution of households by degree of urbanisation DB 100

Degree of Urbanisation		
DB100	Frecuency	cumulative
Densely pop. Area	2201	2201
Intermediate area	1430	3631
Thinly pop. Area	6298	9920

2.3.3.3c Distribution of households by DB 135 (household interview acceptance)

DB 135 Household interview acceptance

DB 135	2007
1	7138
Missing	2737
TOTAL	9920

2.3.3.4 Distribution of substituted unit

Not applicable

2.3.3.5 Item non response

Item non-response of observations for income components		
Cross-sectional sample 2007 (persons ot households)		
	% of persons 16+	% of persons 16+
Income Components	having received ammount	with missing values
EMPLOYEE CASH OR NEAR CASH INCOME NET	98,3	1,7
NON-CASH EMPLOYEE INCOME NET	98,3	1,7
CONTRIBUTIONS TO INDIVIDUAL PRIVATE PENSION PLANS NET	98,3	1,7
CASH BENEFITS OR LOSSES FROM SELF-EMPLOYMENT NET	98,3	1,7
VALUE OF GOODS PRODUCED BY OWN-CONSUMPTION NET	98,3	1,7
PENSION FROM INDIVIDUAL PRIVATE PLANS NET	98,3	1,7
UNEMPLOYMENT BENEFITS NET	98,3	1,7
OLD-AGE BENEFITS NET	98,3	1,7
SURVIVOR' BENEFITS NET	98,3	1,7
SICKNESS BENEFITS NET	98,3	1,7
DISABILITY BENEFITS NET	98,3	1,7
EDUCATION-RELATED ALLOWANCES NET	98,3	1,7
EMPLOYEE CASH OR NEAR CASH INCOME GROSS	98,3	1,7
NON-CASH EMPLOYEE INCOME GROSS	98,3	1,7
CONTRIBUTIONS TO INDIVIDUAL PRIVATE PENSION PLANS GROSS	98,3	1,7
CASH BENEFITS OR LOSSES FROM SELF-EMPLOYMENT GROSS	98,3	1,7
VALUE OF GOODS PRODUCED BY OWN-CONSUMPTION GROSS	98,3	1,7
PENSION FROM INDIVIDUAL PRIVATE PLANS GROSS	98,3	1,7
UNEMPLOYMENT BENEFITS GROSS	98,3	1,7
OLD-AGE BENEFITS GROSS	98,3	1,7
SURVIVOR' BENEFITS GROSS	98,3	1,7
SICKNESS BENEFITS GROSS	98,3	1,7
DISABILITY BENEFITS GROSS	98,3	1,7
EDUCATION-RELATED ALLOWANCES GROSS	98,3	1,7

2.3.3.6 Total item non response

	Total	Percent
Response	7138	72,4
Not found	1195	12,0
Refused too cooperate	1416	14,5
Over coverage	126	1,3
Total	9920	100

The data file on individuals contains information for all respondent households. During the interview we ask for which persons who in fact live in the household of the selected person (to detect differences from the TPR). This correction is only possible to make for respondent households. Response rate is not possible to calculate as household composition for non-response households is not completely known.

2.4 Mode of data collection

The main data collection method was telephone interview (CATI) during 2007. When we contact the selected individuals, we offer the possibility of face-to-face interview as a second alternative if the respondents prefer this for practical reasons. This strategy we use to avoid non response as much as possible.

2.5 Interview duration

Interview duration was approximately 15 minutes per household. (Computed Aid Telephone Interview)

3. Comparability

3.1 Basic concepts and definitions

The reference population

- Reference population is the whole Swedish population except short term migration, people who stay in Sweden 3-12 months, is not covered.

Private household definition

- The regulation definition is applied.

The household membership

- The regulation definition is applied
- The income reference period used is : Year N – 1
- The period for taxes on income and social insurance contributions is : Year N-1
- The lag between the income reference period and current variables
- The field work is carried out during January-December year N.

The total duration of the data collection of the sample

- The data collection was 12 month, January-December

The basic information on activity status during the income reference period

- The twelve calendar months proceeding the month of the interview

3.2 Components of income

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

Only minor deviations with little impact on the results:

- Non-cash employee income includes more than company car (housing cost/ interest on loans below market price etc).
- Regular inter-household cash transfers paid/received do only consider transactions between parents not living together. Other types of alimonies or cash transfers are not included.
- Imputed rent (HY030) was calculating by using variables HH010, HH020, HH030 and a variable based on regional classifications described, the dwelling costs was imputed from our national household budget survey and our national housing survey.

3.2.2 The source or procedure used for collection of income variables

The income variables as well as wealth and taxes is collected by administrative registers and one of the important source is the register of The Swedish National tax Agency and others databases and registers in Swedish Statistics .

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

Gross but exclusive of employers' social contributions

3.2.4 The method used for obtaining income target variables in the required format

The components were gross and available from administrative registers whit the exception of employers' social contribution

4. Coherence

4.1 Comparison of income target variables

The EU-SILC income information is collected from the different administrative sources covering the whole population. The non-response bias has little impact on the estimates. The source of income components is the registers in Swedish Statistics.