



**Statistics Netherlands**

Division of Social and Spatial Statistics  
Department of Support and Development  
Unit Research and Development

*Heerlen  
The Netherlands*

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# **Quality report**

relating to the

**EU-SILC 2005 operation**

**The Netherlands**

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## Preface

In recent years, Statistics Netherlands has focused on an increased use of register data instead of survey data in the production process of statistical information. By making efficient use of register data, Statistics Netherlands intends to improve the accuracy of the statistical information, and, at the same time, to decrease the response burden on households. Examples of administrative registrations are the Population Register (the municipal basic registration of population data; in Dutch: Gemeentelijke BasisAdministratie - GBA), data on social security and tax data. The Population Register (GBA) contains information on age, sex, ethnicity, place of birth, place of residence, marital status and other information for all (registered) persons living in the Netherlands. This registration has been available from 1995 onwards, and is updated monthly. The Labour Force Survey (LFS) is one of the social statistical databases that are linked to the GBA. The design of the LFS is based on a face-to-face interview (CAPI), followed by a four-wave panel by telephone interview (CATI).

The EU-SILC was conducted for the first time in 2005. And for various reasons (costs, response burden, available information), it was decided to consider the option of drawing the EU-SILC to the respondents of the fifth LFS-wave. In doing so, a relatively short telephone-interview (on average 12 minutes) was sufficient to collect the additional EU-SILC information. Consequently, all information based on the Population Register and the LFS is also related to the EU-SILC respondents. In other words, the survey model is an integrated model, based on cross-sectional and longitudinal surveys and register information.

As a result 2005 is the initial year of the EU-SILC in the Netherlands, and most (background) characteristics are already available from other sources. In various chapters of this quality report no information is provided for reasons that it is not applicable. This includes the item non-response for the income distributions (2.3.3.5), procedures for imputation (2.5), second and next EU-SILC waves (2.1.8.5 to 2.1.8.8, and partly the unit non-response in 2.3.3.2). In order to assess information about the quality of the response the external source, IPO has been used as it is used as the source for the national income statistics. The sample consists of approximately 250,000 persons (see chapter 4 on coherence).

# 1. Common Indicators

## 1.1 Laeken-Indicators EU-SILC 2005

In accordance with the regulations in the Commission regulation No 28/2004, following cross-sectional indicators for 2005 are provided.

Table 1.1: Laeken-Indicators EU-SILC 2005

	Total	Female	Male
At-risk-of-poverty rate after social transfers - total	10.8	10.8	10.6
At-risk-of-poverty rate after social transfers - 0-15 years	15.8	16.4	15.3
At-risk-of-poverty rate after social transfers - 16-24 years	15.6	16.4	14.8
At-risk-of-poverty rate after social transfers - 25-49 years	9.9	10.1	9.8
At-risk-of-poverty rate after social transfers - 50-64 years	8.0	7.5	8.5
At-risk-of-poverty rate after social transfers - 65+ years	5.4	5.8	5.0
At-risk-of-poverty rate after social transfers - 16+ years	9.5	9.5	9.4
At-risk-of-poverty rate after social transfers - 16-64 years	10.3	10.4	10.2
At-risk-of-poverty rate after social transfers - 0-64 years	11.6	11.8	11.4
At-risk-of-poverty rate after social transfers - employed	5.9	5.5	6.2
At-risk-of-poverty rate after social transfers - unemployed	27.0	27.1	27.0
At-risk-of-poverty rate after social transfers - retired	4.9	5.4	4.2
At-risk-of-poverty rate after social transfers - other inactive	18.0	15.0	23.3
At-risk-of-poverty rate after social transfers - single, < 65 years	17.4		
At-risk-of-poverty rate after social transfers - single, 65+ years	6.5		
At-risk-of-poverty rate after social transfers - single total	13.8	11.5	16.7
At-risk-of-poverty rate after social transfers - 2 adults, no children, both < 65	7.2		
At-risk-of-poverty rate after social transfers - 2 adults, no children, at least one 65+	4.3		
At-risk-of-poverty rate after social transfers - other households without children	4.8		
At-risk-of-poverty rate after social transfers - single parent, at least one child	23.5		
At-risk-of-poverty rate after social transfers - 2 adults, 1 child	9.1		
At-risk-of-poverty rate after social transfers - 2 adults, 2 children	10.6		
At-risk-of-poverty rate after social transfers - 2 adults, 3+ children	20.1		
At-risk-of-poverty rate after social transfers - other households with children	7.7		
At-risk-of-poverty rate after social transfers - households without children	8.4		
At-risk-of-poverty rate after social transfers - households with children	13.1		
At-risk-of-poverty rate after social transfers - owner or rent-free	7.2		
At-risk-of-poverty rate after social transfers - tenant	17.1		
At-risk-of-poverty rate after social transfers - households without children, $w = 0$	15.7		
At-risk-of-poverty rate after social transfers - households without children, $0 < w < 1$	7.6		

At-risk-of-poverty rate after social transfers - households without children, w = 1	3.5		
At-risk-of-poverty rate after social transfers - households with children, w = 0	52.3		
At-risk-of-poverty rate after social transfers - households with children, 0 < w < 0.5	32.0		
At-risk-of-poverty rate after social transfers - households with children, 0.5 < w < 1	14.7		
At-risk-of-poverty rate after social transfers - households with children, w = 1	6.7		
Relative median at-risk-of-poverty gap - total	21.0	20.1	22.4
Relative median at-risk-of-poverty gap - 0-15 years	20.7		
Relative median at-risk-of-poverty gap - 16-64 years	22.4	19.7	25.9
Relative median at-risk-of-poverty gap - 65+ years	12.3	12.3	11.1
Relative median at-risk-of-poverty gap - 16+ years	21.3	19.3	22.8
Dispersion around the risk-of-poverty threshold - 40%	3.7	3.5	4.0
Dispersion around the risk-of-poverty threshold - 50%	6.3	6.2	6.4
Dispersion around the risk-of-poverty threshold - 70%	19.0	19.7	18.4
At-risk-of-poverty rate before social transfers except old-age and survivors' benefits - - total	21.7	22.1	21.4
At-risk-of-poverty rate before social transfers except old-age and survivors' benefits - 0-15 years	27.8	28.3	27.3
At-risk-of-poverty rate before social transfers except old-age and survivors' benefits - 16-64 years	22.3	23.1	21.5
At-risk-of-poverty rate before social transfers - 65+ years	9.9	9.7	10.2
At-risk-of-poverty rate before social transfers except old-age and survivors' benefits - 16+ years	20.2	20.6	19.8
At-risk-of-poverty rate before all social transfers - total	36.9	39.7	34.2
At-risk-of-poverty rate before all social transfers - 0-15 years	28.2	28.7	27.8
At-risk-of-poverty rate before all social transfers - 16-64 years	27.8	30.1	25.6
At-risk-of-poverty rate before all social transfers - 65+ years	95.2	95.3	94.9
At-risk-of-poverty rate before all social transfers - 16+ years	39.1	42.3	35.8
Inequality of income distribution S80/S20 income quintile share	4.0		
Gini coefficient	26.7		

## 1.2. Other indicators

### 1.2.1. *Equivalised disposable income*

Mean equivalised disposable income: € 18,801

### 1.2.2. *The unadjusted gender pay gap*

The gender pay gap is not computed on the basis of EU-SILC.

## **2. Accuracy**

Accuracy refers to the closeness of computations or estimates to the exact or ‘true’ population values.

### **2.1 Sampling design**

#### *2.1.1 Type of sampling*

The Labor Force Survey sample was drawn from the sampling frame of addresses. This sampling frame was constructed from the Population Register, and is updated monthly.

The sampling design can be classified as a two-stage sampling design, with municipalities as primary sampling units and addresses as secondary sampling units. The systematic sampling of first stage elements is with probability proportional to size (number of addresses per municipality), while the second stage elements are selected with simple random sampling such that the total sampling design becomes self-weighting. The primary sampling units are stratified according to a combination (crossing) of two regional attributes, COROP and interviewer region; the regions are non-overlapping. From the addresses further sampling units are constructed: households, and sample persons in selected households. For the measurement of detailed information on social variables one member of the household aged 16 or older is selected.

#### *2.1.2 Sampling units*

The sampling units are addresses that are registered in the sampling frame. All households on selected addresses are eligible for the survey, up to a maximum of three households per address. All addresses with at least one registered person over 15 are included in the sampling frame.

#### *2.1.3 Stratification criteria*

The stratification variables are the regional variables COROP (40 regions) and interviewer region. The strata are constructed by crossing these variables. Applying this type of stratification allows for representative samples on a regional level. Moreover, this type of stratification makes it possible to use fixed size samples for each of the interviewer regions.

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

From 2004 onwards, the member states have to achieve a minimum effective sample size for the cross-sectional sample. For the Netherlands this net sample size is 6,500 households and 6,500 selected persons over 15 (concerning the measurement of social variables). Correcting for design effects (see document 6504), the minimum achieved sample size is 8,775 households and 8,775 selected persons over 15 years of age. Similar considerations apply for the longitudinal sample: in this case the net sample size is 5,000 households and 5,000 selected persons over 15, and the achieved sample size is 6,500 households and 6,500 selected persons over 15. For the Netherlands, 2005 was the first year of the EU-SILC, and therefore no longitudinal sample is required. However, because of the panel character of the EU-SILC survey, the cross-sectional sample must be large enough to achieve a longitudinal sample of sufficient size in the years 2006 to 2008. Therefore the minimum achieved sample size of the cross-sectional sample is set at a larger value: 9,500 households and 9,500 selected persons aged over 15.

The sampling design is partly based on the design for the Labour Force Survey (LFS), which has a panel structure with five rotational groups. In the first wave, interviews are conducted through face-to-face interviewing. Subsequent waves are conducted through telephone interviewing. The period between waves is three months. When the first wave of the LFS survey has been completed, addresses with all residents aged over 64 are removed from the sample. Households that have taken part in all five waves of the labour force survey are recruited for the EU-SILC survey. If a household is willing to participate, it is contacted in the month following the final LFS interview. As addresses with all residents aged over 64 are no longer present in the last wave of the LFS survey an extra sample is required. We therefore distinguish between two EU-SILC samples: the first sample represents the set of addresses with households that have participated in the LFS survey. At least one of the household members living on such an address is under 65. The allocation of this sample is illustrated in table 2.1. The second sample is a set of addresses with all residents aged over 64. The allocation of this sample is illustrated in table 2.2. Both samples are based on the sample selection scheme of section 2.1.5.

Out of the 35,407 issued addresses, 34,428 addresses were actually used in the LFS. 28,400 addresses were successfully contacted and 12,152 households completed all 5 waves of the labour force survey. As split-off households are included in the survey, 48 extra responding households could be added to the sample in the final wave of the labour force survey. Of the 12,200 households only 10,727 were used for the recruitment of EU-SILC respondents, 8,627 were willing to participate, and 7,875 households completed the household questionnaire. 156 of these interviews were of insufficient quality and had to be rejected, 7,719 interviews were accepted for the database.

Table 2.1: sample size sample 1; at least one resident aged below 65

<i>Issued addresses</i>	35,407
addresses used by the institute for LFS	34,428
addresses not used by the institute for LFS	979
<i>Addresses used by the institute</i>	34,428
addresses successfully contacted for LFS	28,400
addresses not successfully contacted for LFS	6,028
<i>Addresses successfully contacted for LFS</i>	28,400
household questionnaire LFS completed (all waves)	12,152
refusal to co-operate	10,148
household temporarily away for duration of fieldwork	2,399
unable to respond	36
other reasons	3,665
<i>Household questionnaire LFS completed (all waves)</i>	12,152
<i>Split-off addresses with completed questionnaire</i>	48
<i>Household questionnaire LFS completed, including split-off households</i>	12,200
addresses used by the institute for recruiting EU-SILC households	10,727
addresses not used by the institute	1,473
<i>Addresses used for recruiting EU-SILC households</i>	10,727
willing to participate in EU-SILC survey	8,627
not willing to participate	2,100
<i>Willing to participate in EU-SILC</i>	8,627
addresses used by the institute for EU-SILC	8,522
addresses not used by the institute for EU-SILC	105
<i>Addresses used by the institute for EU-SILC</i>	8,522
addresses successfully contacted for EU-SILC	8,182
addresses not successfully contacted	340
<i>Addresses successfully contacted for EU-SILC</i>	8,182
household questionnaire EU-SILC completed	7,875
refusal to co-operate	123
household temporarily away for duration of fieldwork	167
unable to respond	3
other reasons	14
<i>Household questionnaire completed</i>	7,875
accepted for database	7,719
interview rejected	156

For the sample of addresses with all residents aged over 64, all of the issued 3,134 addresses were used. 157 of these were not successfully contacted. Of the remaining 2,977 addresses 1,690 households completed the questionnaire. Again a small number of interviews had to be rejected, 1,637 households were accepted for the database. Combining both samples, the number of households accepted for the EU-SILC database in 2005 is 9,356 households.

Table 2.2. sample size sample 2; all residents at address are 65 or older.

<i>Issued addresses</i>	3,134
addresses used by the institute	3,134
addresses not used by the institute	0
<i>Addresses used by the institute</i>	3,134
addresses successfully contacted	2,977
addresses not successfully contacted	157
<i>Addresses successfully contacted</i>	2,977
household questionnaire EU-SILC completed	1,690
refusal to co-operate	963
household temporarily away for duration of fieldwork	32
unable to respond	274
other reasons	18
<i>Household questionnaire completed</i>	1,690
accepted for database	1,637
interview rejected	53

### 2.1.5 Sample selection scheme

As stated before, the primary sampling units are selected by means of systematic sampling with probability proportional to size. Therefore the ordering of these units in the strata is relevant: the primary sampling units in each of the strata are randomly ordered. The secondary sampling units are selected with simple random sampling in order that the total sampling design becomes self-weighting.

Addresses corresponding to institutions, addresses that have been part of a survey sample in the previous year, and addresses in some small regions of the national territory (West Frisian Islands) are removed from the sample. These addresses are not part of the reference population. In the case of sample 1, a number of sampling units in each of the interviewer regions is randomly removed in order to fit the sample with the available face-to face interview capacity. The sampling design for this sample is therefore no longer strictly self-weighting. In the case of sample 2 the datacollection process has been conducted by telephone interviewing. Only addresses were selected with all residents aged over 64. The resulting samples represent the sets of issued addresses in tables 2.1 and 2.2.

### 2.1.6 Sample distribution over time

The following tables provide an overview of the cumulative sample development for EU-SILC during the fieldwork period from 1 June 2005 to 7 October 2005. Table 2.3 illustrates the sample development of sample 1, table 2.4 that of sample 2.

Table 2.3: sample size over time, EU-SILC sample 1, not all residents at address are over 64

Fieldwork from .. to ..	Processed addresses	Not contacted	Non-response	Completed interviews
01/06 – 30/06	1,763	69	62	1,632
01/06 – 31/07	3,249	148	135	2,966
01/06 – 31/08	5,075	203	187	4,685
01/06 – 07/10	8,522	340	307	7,875



Table 2.4: sample size over time, EU-SILC sample 2, all residents at address are over 64

Fieldwork from .. to ..	Processed addresses	Not contacted	Non-response	Completed interviews
01/06 – 30/06	667	41	273	353
01/06 – 31/07	1,334	60	566	708
01/06 – 31/08	2,234	112	920	1,202
01/06 – 07/10	3,134	157	1,287	1,690

### 2.1.7 Renewal of samples: rotational groups

For the Netherlands, 2005 was the first year EU-SILC was conducted. A new sample was constructed and divided into four rotational groups. Each rotational group is a subsample, each by itself representative of the whole population, and each constructed using the same sampling design. In 2005 one of the subsamples is purely cross-sectional and is not followed up after the first year. Respondents in the second subsample will participate for two years, in the third subsample for three years, and in the fourth subsample for four years. In order to compensate for panel attrition, the subsamples are chosen to be of different sizes: subsamples of respondents that participate longer in the EU-SILC survey are therefore larger. Because accurate panel attrition rates were not available in the first year of the EU-SILC survey, the subsample sizes are chosen to be of quite different sizes in order to guarantee a longitudinal sample of sufficient size in 2006.

Table 2.5: size of rotational groups

	Total	R1	R2	R3	R4
Used addresses	11,656	1,367	1,730	3,665	4,894
Successfully contacted addresses	11,159	1,306	1,662	3,500	4,691
Accepted household interviews	9,356	957	1,331	2,958	4,110

### 2.1.8 Weighting

In this paragraph the computation of cross-sectional weights will be discussed. These weights were calculated in compliance with the Eurostat recommendations for these calculations.

#### 2.1.8.1 Design factor

The design weight is calculated with reference to the design of the sample to take into account the inclusion probability of the sampling units. The design weight is the inverse of the first-order inclusion probability of sampling units.

The sampling design is approximately self-weighting for sample 1 and the sampling units therefore have similar inclusion probabilities and design weights. The design weights are approximately equal to the fraction of the total number of households in the population by the number of households to be contacted in the sample. For sample 2 the sampling design is strictly self-weighting. Due to the use of different selection fractions, the design weights in the two samples are not similar.

### 2.1.8.2 *Non-response Adjustments*

Non-response adjustments are necessary because of the bias introduced by selective non-response on the household level. Selective no response affects the inclusion probabilities of the sampling units. Ideally the inclusion probability can be calculated by multiplying the inclusion probabilities of the sampling design with the exact response probabilities. Unfortunately, in practice these response probabilities are unknown and some kind of approximation has to be made.

The method of logistic regression was adopted to approximate the response probabilities. The response probabilities were modelled by the explanatory variables age, degree of urbanisation, type of household, and labour force status.

### 2.1.8.3 *Adjustments to external data*

Adjustments made by calibration schemes in general improve the accuracy of the data (mean square error). Three good reasons for using calibration schemes are: 1) the estimates of variables that are used in the calibration scheme are made consistent with those of more reliable sources. 2) the standard error of the estimates is reduced if the calibration variables correlate with target variables. 3) non-response bias is reduced if the calibration variables correlate with both target variables and response probabilities.

Two external data sources were used in the calibration procedure:

1. the Population Register (GBA), and
2. the register on income data based on integral data from the tax authorities in 2004.

The adjustments were made on the basis of the base weights: the product of the design weights with the inverse of the response probabilities (non-response weights). The calibration was performed on household and personal level using linear consistent weighting, so that individuals within the household have identical weights equal to the household weight. The set of variables used for calibration includes the smaller subset suggested by Eurostat in document EU-SILC 065/04. Additional calibration variables that correlate strongly with the target variables were added: income data and data on tenure status from the income register. The following variables were included in the calibration scheme:

- sex,
- age, in two classifications: age1 (under 16, 16 to 19, 5 year age groups between 20 and 74, and over 74) and age2 (under 16, 16 to 24, 25 to 49, 50 to 64, and over 64),
- household level: four categories (1, 2, 3 household members and 4 and more household members),
- region: 12 categories, one for each of the provinces (nuts 2),
- tenure status, in two classifications: tenure1 (owner or rent free, tenant), tenure2 (owner or rent free, tenant with rent allowance, tenant without rent allowance),
- equivalized disposable income (CBS-definition) as continuous variable (income0), and in two classifications: income1 (deciles), and income2 (quintiles),
- source of income (employee, self-employed, unemployed, social assistance, disabled, retired aged under 65, retired aged 65 years or older, student, no income).

Taking into account consistency requirements and the correlation of weighting terms with important target variables (Laeken indicators), the following weighting terms were constructed:

*weighting model terms at household level:*

- household size,
- region (nuts 2),
- tenure status (tenure1).

*weighting model terms at personal level:*

- sex x age1,
- income1,
- income2 x age2 x sex,
- income2 x tenure2,
- income2 x income0,
- source of income.

Children's weights were adjusted to the population of 1-year age bands originating from the Population Register (GBA).

#### *2.1.8.4 Final longitudinal weight*

Not applicable. 2005 was the first year for the EU-SILC survey in the Netherlands.

#### *2.1.9 Substitutions*

Not applicable.

## 2.2 Sampling errors

### 2.2.1 Standard errors and effective sample size

Table 2.6: Mean, Number of Observations, and Standard Errors for Income Components (entire sample, weighted, no item non-response)

<b>Income component</b>	<b>Mean</b>	<b>Number of observations</b>	<b>% of households with component</b>	<b>Standard Error</b>
Total household gross income (hy010)	44,149	9,356	100	221.05
Total disposable household income (hy020)	29,681	9,356	100	93.63
Total disposable household income before social transfers other than old age and survivors' benefits (hy022)	26,857	9,356	100	98.11
Total disposable household income before social transfers including old age and survivors' benefits (hy023)	21,472	9,356	100	118.18
<i>Gross income components at household level</i>				
Imputed Rent (hy030g)	2,425	6,137	65.6	16.50
Income from rental of property or land (hy040g)	5,801	5	0.1	2,223.70
Family/child related allowances (hy050g)	1,671	3,309	35.4	12.68
Social exclusion not elsewhere classified (hy060g)	8,556	650	6.9	197.04
Housing allowances (hy070g)	1,568	1,014	10.8	28.45
Regular inter-household cash transfer received (hy080g)	3,772	646	6.9	234.64
Interest, dividends, profit from capital investments in unincorporated business (hy090g)	874	8,171	87.3	48.34
Interest repayments on mortgage (hy100g)	7,278	5,426	58.0	87.41
Income received by people aged under 16 (hy110g)	1,578	168	1.8	370.11
Regular taxes on wealth (hy120g)	-	-	-	-
Regular inter-household cash transfer paid (hy130g)	3,814	1,083	11.6	176.23
Tax on income and social contributions (hy140g)	14,045	9,355	100.0	154.35
<i>Gross income components at personal level</i>				
Employee cash or near cash income (py010g)	26,038	11,865	66.5	209.17
Non-cash employee income (py020g)	4,799	822	4.6	127.83
Employer's social insurance contribution (py030g)	-	-	-	-
Contributions to individual private pension plans (py035g)	2,378	2,708	15.2	264.64
Cash benefits or losses from self-employment (py050g)	17,291	1,535	8.6	1,875.12
Value of goods produced for own-consumption (py070g)	-	-	-	-
Pension from individual private plans (py080g)	20,260	82	0.5	9,226.46
Unemployment benefits (py090g)	8,075	747	4.2	256.12
Old-age benefits (py100g)	16,748	3,761	21.1	246.93
Survivor's benefits (py110g)	9,548	180	1.0	454.50
Sickness benefits (py120g)	3,900	257	1.4	379.25
Disability benefits (py130g)	11,850	816	4.6	288.34
Education-related allowances (py140g)	2,211	854	4.8	64.59

Table 2.7: Mean, Number of Observations, and Standard Error for the Equivalized Disposable Income (breakdown by household size, age groups and sex) (entire sample, weighted, no item non-response).

<b>Equivalized disposable income</b>	<b>Mean</b>	<b>Number of Observations</b>	<b>Standard Error</b>
<i>Population by household size</i>			
1 household member	18,160	2,297	462.77
2 household members	21,301	6,634	250.43
3 household members	19,686	3,894	296.23
4 and more household members	16,825	10,734	140.10
<i>Population by age groups</i>			
<25	16,583	7,751	88.19
25-34	19,632	2,881	187.50
35-44	19,010	4,037	182.61
45-54	20,966	3,584	298.61
55-64	21,266	2,698	347.48
65+	18,277	2,608	461.59
<i>Population by sex</i>			
Male	19,128	11,608	95.24
Female	18,479	11,951	72.79
<b>Total</b>	<b>18,801</b>	<b>23,559</b>	<b>44.18</b>

## 2.3 Non-sampling errors

### 2.3.1 Sampling frame and coverage errors

As already mentioned in paragraph 2.1.1, the sampling frame of addresses is constructed from the Population Register. First a complete list of addresses is made and then divided into 10 disjoint groups: A0, A1, A2 ..., A9. Each of these subsets contains 10% of all the addresses in the Population Register. Subset A0 is used as an address sampling frame for the years 2000, 2010, 2020, ..., subset A1 is used as an address sampling frame for the years 2001, 2011, and so on. With this kind of approach the sampling frames of ten subsequent years are disjoint and addresses that are contacted within one particular year will not be part of another address survey sample for the next nine years. This approach is in compliance with the policy of Statistics Netherlands to reduce respondent burden in all surveys. Finally, additional information on the type of address and number of postal delivery points is added to the sampling frame using data from the Geographical Municipal Registration (in Dutch: Geografisch BasisRegister – GBR). The result is a set of disjoint sampling frames (one for each year) with address information and personal information of all individuals that are registered in a Dutch municipality.

Each year in September the sampling frames for the next year are constructed. The sampling frame of addresses is updated monthly for changes related to births, deaths, migration, new addresses, and vacancies. Also taken into account are changes in municipality boundaries and postal codes. At the date of sample drawing the entries of the sampling frame are therefore practically equal to those in the Population Register (GBA). As the fieldwork period starts six weeks later, coverage errors may occur: during the six weeks between drawing and application of the sample new addresses will be established and some addresses have become vacant or have been demolished.

Institutional addresses are removed after drawing the sample by comparing the sample addresses with entries in the register of institutional addresses. This register is updated once a year, so a small number of over-coverage errors are to be expected.

### 2.3.2 *Measurement and processing errors*

Measurement errors originate from four basic sources:

- (a) the questionnaire (effects of the design, content and wording);
- (b) the data collection method (effects of the modes of interviewing);
- (c) the interviewer (effects of the interviewer on the response to a question including errors of the interviewer);
- (d) the respondents (effects of the respondent on the interpretation of items).

Statistics Netherlands implemented a number of measures to reduce such errors. In a first step in a questionnaire laboratory, in 2002 the EU-SILC questionnaire has been tested extensively in a pre-test and a field-test (Snijkers, Beukenhorst and Huynen, 2002).

The aim of this testing was to assess whether:

- The EU-SILC questions are understood and answered by respondents as intended and, if not, how the questions can be improved.
- Any problems occurred during the interviews with regard to the reading aloud by the interviewer or answering of the questions by respondents.

The laboratory pre-test addressed both aims mentioned above, whereas the field test focused on the second aim. Starting from the preliminary report of the laboratory pre-test (Giesen et al, 2002; Eurostat, 2001) rephrased the questions on health, among others. The Questionnaire Laboratory of Statistics Netherlands conducted face-to-face computer-assisted pre-test interviews with 10 volunteer respondents. In 20 in-depth interviews, the wording and comprehensibility of the questionnaire, duration of the interview and the sequence of the questions has been examined. This was important, particularly to improve the instructions for the interviewers (more information is included in Giesen et al, 2002).

In June 2004, a pilot was conducted among 266 people. It was demonstrated that the response was rather high: 237 out of the 266 selected people were willing to cooperate in an EU-SILC survey. Among them, a total of 222 – which equals 94% – actually participated in the survey. Also the duration of the interview, the sequence of the questions and respondents' attitude toward the questionnaire were tested. The overall opinion about the questionnaire was positive. The first impression of the respondent about the questionnaire was 'pleasant', 'not difficult to answer', and 'comprehensible'. Only minor changes in a few questions (such as about the consultation of the dentist) were necessary. In addition, a logistical test was conducted to test the processing of the data. All this information was used to improve the design and to minimize the non-sampling errors.

The selected interviewers for EU-SILC were all employees at Statistics Netherlands and experienced in CATI-interviews of the Labour Force survey. On 13 October 2005, the EU-SILC was evaluated by 20 interviewers. They reported only minor problems. They agreed that the question concerning the fixed housing expenditures is not clear enough for the respondents. They also questioned the length of some questions, such as 'Did a situation occur during the last 12 months in which a consultation, examination or treatment by a dentist did not take place, even though in your opinion it was necessary?'

One point of concern is the number of proxy-interviews. One month after the fifth wave in the LFS the households were approached to participate in EU-SILC. After questions regarding the composition of the

household and other questions on the household level (such as house, household income, durable goods), questions on the personal level (e.g. health) were asked. Unfortunately, in 27% of the cases such personal questions were answered by a proxy and only in 73% by the selected person. From 2006 onwards, specific measures will be taken to substantially reduce the number of proxy-interviews, such as interview-training and specific instructions how to approach the selected person in the household.

Table 2.8: Distribution of Proxy Interviews by Basic Activity Status (selected respondents)

<b>Basic Activity Status</b>	<b>All Interviews</b>	<b>Personal Interviews</b>	<b>Ratio of Personal Interviews</b>	<b>Proxy Interviews</b>	<b>Ratio of proxy Interviews</b>
At work	5,906	4,109	69.6	1,797	30.4
Unemployed	123	102	82.9	21	17.1
Retirement/early Retirement	769	641	83.4	128	16.6
Other inactive	2,397	1,889	78.8	508	21.2
<b>Total</b>	<b>9,195</b>	<b>6,741</b>	<b>73.3</b>	<b>2,454</b>	<b>26.7</b>

### 2.3.3 Non-response errors

#### 2.3.3.1 Achieved sample size

In 2005 a new sample was constructed and divided in four rotational groups. In table 2.9 it is shown that the four groups differ in size to compensate for panel attrition. The first group will participate for one year (purely cross-sectional), the second for two years, the third for three years and the fourth for four years. Consequently the sample size for the first group (R1) is smaller than the sample size for the second group (R2), followed by the third (R3) and the fourth group (R4). The first group will be replaced by a new sample for EU-SILC 2006.

Table 2.9: Sample Size and accepted Interviews

	<b>Total</b>	<b>R1</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
Persons 16 years and older	17,852	1,667	2,581	5,674	7,930
Number of sample persons	9,356	957	1,331	2,958	4,110
Number of accepted personal questionnaires	17,852	1,667	2,581	5,674	7,930
Accepted household interviews	9,356	957	1,331	2,958	4,110

#### 2.3.3.2 Unit non-response

Indicators of unit non-response are included in table 2.10. The calculated non-response rate differs slightly between the four rotational groups. In particular the response rate in group R3 is lower compared to the groups R1, R2 and R4. The reason for the phenomenon is that the available sample in R3 was not fully used in this period (August 2005). Consequently, not all LFS-respondents in this period were requested to participate in EU-SILC.

Table 2.10: Indicators on Unit Non-response

	<b>Total</b>	<b>R1</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
Addresses successfully contacted	30,804	2,673	3,730	12,550	11,851
Valid addresses selected	35,485	3,033	4,275	14,524	13,653
RA address contact rate	0,87	0,88	0,87	0,86	0,87
Number of household interviews completed	9,356	1,331	2,958	4,110	957
RH (proportion of completed household interviews accepted)	0,30	0,36	0,36	0,24	0,35
NRh (Household non-response rate) %	73.6	68.4	68.9	79.6	69.9
Personal interviews completed	17,852	1,667	2,581	5,674	7,930
Number of eligible individuals	17,852	1,667	2,581	5,674	7,930
Rp	1	1	1	1	1
Individual non response rate (%)	0	0	0	0	0
Overall individual non-response (%)	73.6	68.4	68.9	79.6	69.9

1) proportion of complete interviews within the households accepted for the database

### 2.3.3.3 Distribution of households by household status (DB110), by record contact at address (DB120), by household questionnaire result (DB130) and by household interview acceptance (DB135)

Table 2.11: Distribution of DB120, DB130 and DB135

	<b>Total</b>	<b>R1</b>	<b>R2</b>	<b>R3</b>	<b>R4</b>
<i>DB120 –Contact at address</i>					
Address contacted	30,804	2,673	3,730	12,550	11,851
Address unable to access	4,681	360	545	1,974	1,802
Address does not exist	2,093	149	214	1,004	726
Total	37,578	3,182	4,489	15,528	14,379
<i>DB130- Household questionnaire result</i>					
Household questionnaire completed	9,562	972	1,368	3,008	4,214
Refusal to cooperate	13,698	1,188	1,555	5,816	5,139
Entire household temporary away	2,585	202	302	1,155	926
Household unable to respond	313	53	70	73	117
Other reasons	4,646	258	435	2,498	1,455
Total	30,804	2,673	3,730	12,550	11,851
<i>DB135- Household interview acceptance</i>					
Interview accepted for database	9,356	957	1,331	2,958	4,110
Interview rejected	206	15	37	50	104

### 2.3.3.4 Distribution of persons for membership status (RB110)

not applicable



### 2.3.3.5 Item non-response

As information on household and individual level is based on register information – except for the two questions concerning the inter-household transfers (paid and received) – all income variables do not consist item non-response. In table 2.12 the item non-response is provided for the transfers paid and received.

Table 2.12: Information on Item Non-response on Household Level

<b>Households having received an amount</b>	Full information	Partial information (imputed)	Total number of observations	%
Regular inter-household cash transfer received (HY080G)	576	79	646	6.9
Regular inter-household cash transfer paid (HY130G)	950	133	1,083	11.6

## 2.4 Mode of data collection

The response part of Labour Force Survey has been used as the sampling frame for EU-SILC. As a result, a substantial reduction of the questionnaire has been achieved. Consequently, on average, the duration of an EU-SILC interview was not more than 12 minutes. This enabled Statistics Netherlands to use Computer Assisted Telephone Interview (CATI) as interview mode as the interview did not exceed the policy-rule of 15 minutes.

Table 2.13: Distribution of RB250 and RB260

	Total	R1	R2	R3	R4
<i>RB250- data Status</i>					
Information completed only from registers (11)	112	1	6	8	97
Information completed from both interview and registers (13)	17,740	1,666	2,575	5,666	7,833
Total	17,852	1,667	2,581	5,674	7,930
<i>RB260 – Type of interview</i>					
CATI (3)	10,721	1,089	1,582	3,404	4,646
Proxy interview (5)	7,019	577	993	2,262	3,187
Total	17,740	1,666	2,575	5,666	7,833

## 2.5 Duration of interview and imputation procedure

The total duration of the interview equals 12 minutes on average per household and it includes the personal (selected respondent) and the household questionnaire.

## 2.6 Imputed rent

For estimating the equivalent market rents in EU-SILC, the parameter estimates have been calculated based on another survey, the Survey on Household Expenditures. A regression model was applied on the estimates of market rents of owner-occupiers by real estate agents. This model includes the market value of the dwelling, region, level of urbanisation and household type. The total market rent is calculated by the National Account Statistics. Next the distribution of the market rent over the households is based on the results of the regression model.

## 2.7 Company cars

The estimation of the value of ‘company car’ has been specified by the amount of benefit for which the recipient is assessed for tax purposes. The calculation of the employee income component ‘company car’ follows the rules of the tax authorities. As a general rule one has to add 22% of the value of the car to the income. Important are the original price of the company car and the intensity (kilometres) of private use.

## 2.8 Total Housing costs (HH070)

Variable HH070 provides information on total housing costs. The concept of housing costs refers to monthly costs connected with the household’s right to live in the accommodation. The costs of utilities (water, electricity, gas and heating) resulting from the actual use of the accommodation are also included. Components that have to be included in housing costs:

(a) OWNERS: Mortgage interest payments (net of any tax relief), structural insurance, mandatory services and charges (sewage removal, refuse removal, etc.), regular maintenance and repairs, taxes, and the costs of utilities (water, electricity, gas and heating).

(b) TENANTS (at market price): Rent payments, gross of housing benefits (i.e. housing benefits included), structural insurance (if paid for the tenants), services and charges (sewage removal, refuse removal, etc.) (if paid for the tenants), taxes on dwelling (if applicable), regular maintenance and repairs and the cost of utilities (water, electricity, gas and heating).

(c) TENANTS (at reduce price) or RENT FREE: imputed rent (housing benefits included), structural insurance (if paid for), services and charges (sewage removal, refuse removal, etc., if paid for), taxes on dwelling (if applicable), regular maintenance and repairs and the cost of utilities (water, electricity, gas and heating).

It is necessary to impute a value of housing costs for items not included in the rent but paid separately, such as costs of the utilities, sewage removal and structural insurance.

To determine the housing costs three data sources have been used.

- Survey on household expenditures (in Dutch: *Budgetonderzoek*): determining which components belong to the concept of ‘housing costs’ and the accompanying regression equation.
- EU-SILC: background variables as reported by the EU-SILC households.
- Income statistics: information on income, mortgage payments and the appraisal of real estate value.

Variable HH070 (total housing costs) consists of two parts. For house owners it includes mortgage payments and other housing costs. The information on mortgage payments has been derived from the fiscal registers. For tenants it includes rent payments and other housing costs. Rent payments are included in the household data-file (variable HH060).

The determination of the ‘other housing costs’ is based on the survey on household expenditures (HBS). It is determined which costs belong to the housing costs (mortgage payment and rent excluded). Among other expenditures, it concerns costs for maintenance of the house, utilities and house related taxes and insurances. Subsequently a regression equation has been used to estimate these costs. The following independent variables are included:

- Disposable household income
- Real estate value
- Number of people living in the household
- Number of rooms in the dwelling
- Property status (tenant or owner)
- Type of dwelling

Since not all variables used in the model were asked for in the EU-SILC, the variables for income and real estate value are derived from fiscal registers. For those households with a negative disposable income or an unknown real estate value, additional equations are made without these independent variables. This model gives an estimated yearly amount of ‘other housing costs’, which can be converted to a monthly amount. Together with the variables for rent and mortgage payments a value for ‘total monthly housing costs’, HH070, can be estimated.

## **2.9 Administrative data**

In recent years, Statistics Netherlands has focused on an increased use of register data instead of survey data in the production process of statistical information. Examples of administrative registrations are the Population Register (in Dutch: GBA), data on social security and tax data. The GBA is a fully decentralised, comprehensive and cohesive registration which contains information on age, sex, ethnicity, place of birth, place of residence, marital status, and etcetera for (registered) persons living in the Netherlands. This registration is available from 1995 onwards.

Most of the present administrative Registers are provided with a unique link key. This is the so-called social security and fiscal number (SoFi-number). This SoFi-number is a personal identifier for every (registered) Dutch inhabitant and for those living abroad who receive an income from activities in the Netherlands and consequently have to pay tax over their earnings to the Dutch fiscal authorities. A few SoFi-numbers may be registered with incorrect values in the data-files, in which case linkage with other files is doomed to fail. However, in general, the percentage of matches is close to 100 percent. All social statistics data-files can be linked to the GBA, which in practice means that all these data-files can be linked to each other via the GBA.

## **2.10 Linking EU-SILC information to administrative data**

Not all information needed for EU-SILC can be obtained by information based on registers. For example, no required EU-SILC information at the individual level is available for educational attainment, occupation, number of working hours, type of employment contract and other variables such as subjective health status. Therefore, such information still needs to be collected through surveys.

In surveys records do not have a SoFi-number. This is also true for the EU-SILC part in which data are collected by interviews. For those records an alternative link key must be used, which is often built up by combining a set of identifying variables (address, sex and date of birth). This sort of link key will in most cases be successful in distinguishing people. However, it is not a 100 percent unique combination of identifiers. When linking the Population Register as well as the records from EU-SILC with this alternative key – and tolerating a variation between sources in at most one of the variables sex, year of

birth, month of birth or day of birth – it reveals that 99 percent of the EU-SILC-records can be linked. The other persons and their household members have been rejected from the database. Consequently, the EU-SILC database includes full information on the income variables. As a result, further imputations have not been implemented.

This 99 percent linked cases is a very good result, though we should not exclude a danger of selectivity in the micro-linking process. If the unlinked records belong to a selective subpopulation, then estimates based on the linked records may be biased, because they do not represent the total population. Analysis in the past has indicated that the young people, the 15–24 age group, show a lower linking rate in household sample surveys than other age groups. The explanation for this phenomenon is that they move more frequently and therefore they are often registered at the wrong address (e.g. students). However, in using a weighting model which includes age, any selectivity in the database has been solved accordingly.

### **3. Comparability**

This chapter reports on the differences between Eurostat definitions and the definitions Statistics Netherlands applied in EU-SILC 2005. It also reports in the impact of these differences on the comparability.

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

##### (a) Reference population

The reference population of EU-SILC is all private households and their current members residing in the Netherlands at the time of data collection. The West Frisian Islands with the exception of Texel were excluded from the target population. This is also true for persons living in collective households and in institutions.

##### (b) Private household

No difference to the common definition.

##### (c) Household membership

No difference to the common definition.

##### (d) Income reference period(s)

The income data of EU-SILC 2005 refer to the calendar year 2004. The income data were mainly collected from registers.

##### (e) The period for taxes on income and social insurance contributions

Taxes on income and social contributions are based on the 'income received' in the income reference year (accrual basis) and do not refer to the amounts actually paid in the income reference year.

##### (f) The reference period for taxes on wealth

There are no taxes on wealth in the Netherlands.

##### (g) The lag between the income reference period and current variables

The EU-SILC fieldwork period started in June 2005 and ended at 7 October 2005. Therefore the lag is at minimum 5 months and at maximum 10 months.

(h) The total duration of the data collection of the sample

The total duration of the data collection was approximately 5 months.

(i) Basic information on activity status during the income reference period

The monthly activity status during the income reference period is mainly based on register data on the main income source. The distinction between full-time and part-time work is based on the survey part of EU-SILC and the LFS.

### 3.2 Income components

There are some differences in the definition of total gross income and disposable income based on the national definition and the SILC definition.

According to the Commission Regulation:

- *Interest paid on consumer debts is not considered as part of income definition in EU-SILC. In Statistics Netherlands' statistics on disposable household income interest payments on consumer debts are deducted to derive the disposable income.*
- *Contributions to individual private pension plans (PY035) and pension from individual pension plans (PY080) are classified under items which are not to be considered as income. In Statistics Netherlands' statistics on disposable household income, regular contributions to and benefits from private insurance schemes covering the risk of income loss are treated similarly as regular contributions to and benefits from (mandatory) social insurance and pension insurance schemes. This implies that contributions are deducted and benefits are added to derive disposable income.*

Table 3.1: Disposable income at household level: national definition and EU-SILC definition, 2004 <sup>1)</sup>

	EU-SILC	IPS		
	median	mean	median	mean
	x 1000 euro			
Gross household income	39,9	48,3	39,7	48,2
Disposable household income	25,5	29,2	25,0	28,5

1) imputed rent and interest repayment on mortgages are included, inter-household transfers are excluded

Source : IPS

The figures in table 3.1 show the effect of using different definitions. The difference is quite small for gross household income. Mean disposable household income according to the national definition is lower mainly because of the subtraction of private health premiums.

For the intervening period between ECHP and EU-SILC the indicators have been calculated on data from the Income Panel Survey (IPS). In order to ensure the maximum degree of comparability with indicators definitions and methodology retained during the transition period were as close as possible to the ones adopted for EU-SILC. Disposable income was defined as gross income less income tax, regular taxes on wealth, employees', self-employed and unemployed compulsory social insurance contributions and inter-household transfers paid. For this reason, premiums for private (voluntarily) health insurance were not subtracted from disposable income. Only compulsory health premiums were subtracted.

However, for the EU-SILC 2005 operation no distinction has been made between compulsory and private voluntarily insurance. Both insurances are recorded in variable HY140G (tax on income and social contributions) and have been deducted from gross income to derive disposable income. The reason for this adaptation is to anticipate on the change of the insurance system in 2006 in the Netherlands. Consequently, the results of the EU-SILC 2005 will be more comparable with future years but are less comparable with the figures that were submitted during the transition period.

#### ***New health insurance system in the Netherlands***

The health insurance system in the Netherlands has been changed on 1 January 2006. A distinction will no longer be made between compulsory and private voluntarily health insurance. Before 2006, employees as well as people entitled to a social benefit and self-employed people with incomes below a certain level were insured under the compulsory Social Health Insurance Act (in Dutch: Ziekenfondswet). People with a higher income could choose to either take out a private health insurance or to go through life uninsured. From 1 January 2006, everybody who resides or pays income tax in the Netherlands has a legal obligation to take out personal health insurance. Parents must do so for their children. Compulsory health insurance, private health insurance and medical expenses schemes for civil servants have been replaced by a single health insurance system that covers essential care. As of 1 January 2006, everybody will be covered by the same health insurance system, regulated by law. Insurers are legally bound to accept everybody who applies for health insurance. They are not allowed to charge higher premiums for the elderly or the sick. Supplementary health insurance remains an option.

The way the health insurance is paid for has also been changed and consists of two components: The premium for the new-style insurance consists of two components:

##### *1) Insurance premium payable to the insurer.*

Everybody over 18 will pay their insurer an insurance premium – the ‘flat rate’ premium for the basic package. How much premium they pay depends on the insurer and the insurance package. The average premium is about 1100 euros per year.

##### *2) Income-related contribution, payable via the Tax Department.*

Everybody who earns an income owes an income-related contribution for their health insurance. The contribution equals to 6.5% of the income up to a given income limit. The employer or the organisation that pays the statutory benefits is obliged to reimburse fully for this contribution. Employers deduct the income-related contribution from the part of an employee’s salary that is subject to payroll tax. For people who do not have an employer, and who do not receive unemployment benefits, the income-related contribution is 4.4%. Depending on income one can qualify for a ‘healthcare allowance’ towards the cost of health premium. Through this allowance, the government compensates some of the premium costs that people with a low income must pay for their health insurance.

Table 3.2 demonstrates the consequence of subtracting private health premiums (income B) from disposable income. These figures are derived from data from the Income Panel Survey (IPS) 2004, since IPS has been the national source for the calculation of Laeken-indicators during the transition period between ECHP and EU-SILC. Indicators based on income A (without subtracting private health insurance premiums) were submitted by Statistics Netherlands to Eurostat during the transition period. In order to ensure the maximum degree of comparability with indicators, countries definitions and methodology retained during the transition were as close as possible to the ones adopted for EU-SILC. For this reason, premiums for private (voluntarily) health insurance have not been deducted when calculating disposable income. Only compulsory health premiums were deducted.

Subtracting private health premiums decreases mean equivalised disposable income with approximately 750 euros. The decrease in income mainly affects people in households with 'higher' income, because private health premiums are payable for households with an income above a certain income limit. The at-risk-of-poverty-rate decreases with 1% to 11.3% as the effect on median equivalised income is negative.

Table 3.2. The effect of subtracting private health premiums from disposable income <sup>1)</sup>

		2003	2004	
		Income A	Income A	Income B
		<i>X 1000 euro</i>		
Mean equivalised income		19,4	19,6	18,9
Median equivalised income		17,5	17,7	17,0
At-risk-of-poverty threshold	<i>1 person hh</i>	10,5	10,6	10,2
	<i>2 adults 2 dep. children</i>	22,1	22,3	21,4
At-risk-of-poverty rate (%)		12	12,3	11,3
Dispersion around the threshold (%)	<i>(a) 40% of median</i>	3,8	3,9	3,8
	<i>(b) 50% of median</i>	6,6	6,7	6,4
	<i>(c) 70% of median</i>	20,7	21,0	19,5
S80/S20 quintile ratio		4,1	4,3	4,2

1) imputed rent, interest repayments on mortgage and inter-household transfers are excluded

2) these figures were submitted to Eurostat during the transition period

Source: IPS

### 3.2.1 Differences in definitions of the income target variables

Income variables with no differences from standard EU-SILC definitions are not mentioned.

#### Total household gross income (HY010):

Non-monetary income components (with the exception of the company car) as well as interest paid on mortgage and employers social insurance contributions are not mandatory yet. For this reason the total household income (gross/disposable) has been computed without taking account the non-monetary components (with the exception of company car) as well as the employers' social insurance contributions, the interest paid on mortgage and imputed rent.

Hence, HY010 is defined as:

HY040G+HY050G+HY060G HY070G+HY080G+HY090G + HY110G

plus the sum for all household members aged 16 years ore more :

PY010G +PY020G+PY050G+ PY070G + PY090G + PY100G+ PY110G+ PY120G+ PY130G+ PY140G.

#### Total disposable household income (HY020):

Defined as Total gross income minus (HY120G+HY130G+HY140G).



Total disposable household income before social transfers except old-age and survivor's benefits (HY022):  
In order to calculate HY022 Statistics Netherlands calculated the taxable income without the income components:

PY090G + PY120G + PY130G + PY140G + HY050G + HY060G + HY070G.

Subsequently the payable tax on income and social insurance contributions have been corrected. The reason for this adaptation – the exclusion of these income components – is to calculate the fictitious amounts that should have been paid if such social transfers were not received.

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

Like HY022, but the income components PY100G and PY110G were also excluded.

Family/children-related allowances (HY050):

Maternity and parental leave benefits are not included in HY050 as those benefits cannot be separated from wages. These components are included in variable PY010.

Regular inter-household cash transfers received - (HY080):

Alimonies received from former spouse are available in the Tax Administration. Other transfers like payments received from parents living in a separate household (e.g. students) and child alimony are collected in the EU-SILC- interview.

Regular taxes on wealth (HY120):

There are no taxes on wealth in the Netherlands.

Regular inter-household cash transfers paid (HY130):

Maintenance allowances to former spouse were collected from the Tax Administration. Other transfers like child alimony are collected in the EU-SILC interview.

Total tax on income and social contribution (HY140):

When calculating disposable income some components were excluded (interest repayments on mortgage, imputed rent). Therefore, this variable refers to the fictitious amounts that have to be paid as if there were no (tax deductible) interest repayments on mortgage.

Gross employee cash income (PY010):

Allowances for transport to or from work are not included in PY010. Severance and termination payments to compensate employees and redundancy payments (including lump-sum payments) are also included in PY010. They are not included in PY090G (unemployment benefits).

Unemployment benefits (PY090):

PY090 includes the vocational training allowance, i.e. payment by social security funds or public agencies to targeted groups of persons in the labour force who take part in training schemes intended to develop their potential for employment. Statistics Netherlands has no information available on benefit (in-kind) related to vocational training.

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

The variables concerning income, wealth and taxes were almost entirely collected from registers. The most important source is the Tax Administration. Data on rent subsidies are obtained from the Ministry of Housing. Student grants were obtained from the student loan company. Some components were imputed on the basis of information given in the questionnaire. For example, child benefits were calculated on the basis of the information about the number and age of children in the household.

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

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.

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

Not applicable

## 4. Coherence

Coherence refers to the comparison of target variables with external sources.

### 4.1 Description of data sources

#### *The Income Panel Survey (IPS)*

The main aim of IPS is to provide a detailed description of the composition and distribution of income of persons and households. The IPS-panel started in 1989. A simple random sample of individuals of 0.61% of the population was selected. This is the nuclear sample. These individuals are followed in the panel. Each year 0.61% of all new-born children and immigrants is added to the sample to counterbalance the effect of attrition. The complete sample consists of everyone belonging to the households of the individuals who belong to the nuclear sample. This extension to all household members results in a total sample of about 250.000 persons. However, only those persons belonging to the nuclear sample are followed in the panel. Other household members will only be followed when they remain with the reference person. The reference population is the population at the end of the year. The IPS is based mainly on information from the tax department and the PR. The IPS contains information on income of the person and of the other members of the household, a limited set of personal characteristics (age, sex and marital status) and some household characteristics (household composition). The household income is derived by aggregating the incomes of all the members of the household.

#### *Continuous Survey on Living Conditions (POLS)*

Statistics Netherlands has developed an continuous survey on living conditions (POLS), which started in 1997 and has been conducted yearly. The design of POLS is based on a modular structure consisting of a joint sample frame and a joint questionnaire, including the question on General Health measuring the perceived health status. In 2005 a total of 10,378 persons were interviewed.

### 4.2 Comparison of income target variables with IPS

The result of the comparison between IPS 2004 and the incomes reported from EU-SILC 2005 is shown in Table 4.1. Both sources are compared using national definitions of income. The most important differences with EU-SILC definitions for the 2005 operation are:

- Imputed rent is included; interest on mortgage is subtracted from disposable income;
- Income from private pension plans and other income insurance plans is included, premiums are subtracted.

Equivalised income has been computed using the OECD-equivalence scales.

Table 4.1. Comparison of indicators: EU-SILC 2005 and IPS 2004

		EU-SILC	IPS
		<i>X 1000 euro</i>	
Mean disposable income <sup>1)</sup>		32,9	33,0
Mean equivalised income <sup>1)</sup>		18,2	18,0
Median equivalised income <sup>1)</sup>		16,3	16,3
At-risk-of-poverty threshold	<i>1 person hh</i>	9,8	9,8
	<i>2 adults 2 dep. children</i>	20,6	20,5
At-risk-of-poverty rate (%)		10,9	10,9
Dispersion around the threshold (%)	<i>(a) 40% of median</i>	4,4	3,9
	<i>(b) 50% of median</i>	6,7	6,3
	<i>(c) 70% of median</i>	19,1	18,6
S80/S20 quintile share ratio		4,4	4,3

1) on personal level

### 4.3 Comparison of number of persons and households who receive income from each 'component'

Table 4.2 and table 4.3 show the comparison between EU-SILC and IPS on income-component level. The differences on the personal level (see table 4.2) are quite small, with the exception of variable PY035G (contribution to individual private pension plans). This difference is caused by the private health insurance premiums which are included in IPS and excluded in IPS (see chapter 3).

In addition, the differences on the household-level between EU-SILC and IPS are small. However, the differences are large for the inter-household transfers (HY080G and HY130G) due to extra collected information in the EU-SILC interview (see chapter 3). Furthermore the difference is large for variable HY040G (Income from rental of a property or land) because of the lack of register information on this component. In the Income Panel Survey these amounts are imputed. Unfortunately, it is not possible to implement this imputation procedure in EU-SILC. However, this will hardly affect the results of the Laeken indicators and disposable household income as the number of households receiving this component is rather small (200 thousand out of 7,1 million).

Table 4.2 Personal income components, IPS-EU-SILC, 2004

	count	sum	median	mean
<b>EU-SILC</b>	<i>x 1000</i>	<i>mln euro</i>	<i>x 1000 euro</i>	
PY010G Employee cash or near cash income	7,859	204,636	23,7	26,0
PY020G Non-Cash employee income	519	2,492	4,5	4,8
PY030G Employer's social insurance contribution 1)	-	-	-	-
PY035G Contributions to individual private pension plans	1,732	4,119	0,9	2,4
PY050G Cash benefits or losses from self-employment	1,235	21,363	6,4	17,3
PY080G Pension from individual private plans	62	1 263	5,7	20,3
PY090G Unemployment benefits	611	4 934	5,7	8,1
PY100G Old-age benefits	2,943	49,294	12,6	16,7
PY110G Survivor' benefits	111	1 058	12,5	9,5
PY120G Sickness benefits	219	856	1,7	3,9
PY130G Disability benefits	693	8 211	11,4	11,9
PY140G Education-related allowances	711	1 572	2,1	2,2
<b>IPS</b>				
PY010G Employee cash or near cash income	7,760	201,869	22,8	26,0
PY020G Non-Cash employee income	508	2 517	4,6	5,0
PY030G Employer's social insurance contribution 1)	7,482	42,057	4,8	5,6
PY035G Contributions to individual private pension plans	5,427	3 988	0,2	0,7
PY050G Cash benefits or losses from self-employment	1,147	18,337	9,2	16,0
PY080G Pension from individual private plans	71	824	6,9	11,5
PY090G Unemployment benefits	621	5 528	6,2	8,9
PY100G Old-age benefits	2,899	47,469	12,5	16,4
PY110G Survivor' benefits	144	1,443	12,8	10,0
PY120G Sickness benefits	239	893	1,6	3,7
PY130G Disability benefits	658	8,670	12,6	13,2
PY140G Education-related allowances	706	1 675	2,2	2,4

1) mandatory from 2007 onward

Table 4.3 Household income components, IPS-EU-SILC, 2004

	count	sum	median	mean
<b>EU-SILC</b>	<i>x 1000</i>	<i>mln euro</i>	<i>x 1000 euro</i>	
HY030G Imputed rent	3,641	8,831	2,1	2,4
HY040G Income from rental of a property or land	3	17	3,6	5,8
HY050G Family/Children related allowances	1,952	3,261	1,5	1,7
HY060G Social exclusion not elsewhere classified	725	6,199	8,9	8,6
HY070G Housing allowances	1,157	1,814	1,6	1,6
HY080G Regular inter-household cash transfer received	565	2,132	2,6	3,8
HY090G Interest, dividends, profit from capita gain	5,815	5,084	0,3	0,9
HY100G Interest repayments on mortgage	3,169	23,065	6,1	7,3
HY110G Income received by people under 16	88	139	0,4	1,6
HY120G Regular taxes on wealth	-	-	-	-
HY130G Regular inter-household cash transfer paid	791	3,015	2,4	3,8
<b>IPS</b>				
HY030G Imputed rent	3,638	8,339	2,0	2,3
HY040G Income from rental of a property or land	200	987	1,9	4,9
HY050G Family/Children related allowances	1,939	3,166	1,5	1,6
HY060G Social exclusion not elsewhere classified	777	6,155	6,6	7,9
HY070G Housing allowances	1,047	1,607	1,6	1,5
HY080G Regular inter-household cash transfer received	60	558	5,9	9,3
HY090G Interest, dividends, profit from capita gain	5,583	9,364	0,3	1,7
HY100G Interest repayments on mortgage	3,252	23,691	5,9	7,3
HY110G Income received by people under 16	111	89	0,4	0,8
HY120G Regular taxes on wealth	-	-	-	-
HY130G Regular inter-household cash transfer paid	86	551	3,6	6,4

#### 4.4 Comparison with POLS of Perceived Health Status

In the table below results based on EU-SILC and POLS are presented. It reveals that the distributions of the two sources are almost equal. The general health condition in EU-SILC was perceived as very good in 21%, good in 56%, fair in 18%, bad in 4% and very bad in 1%. The percentages for POLS are 21, 55, 19, 4 and 1 respectively. Note that a good to very good perceived health equals 76% for both sources.

Table 4.4: People aged 16 years and older by general health

General health	EU-SILC	POLS	EU-SILC	POLS	EU-SILC	POLS
	%					
	Total		Male		Female	
Very good	20,7	21,4	23,1	23,8	18,3	19,1
Good	55,7	54,9	56,3	55,1	55,1	54,7
Fair	18,4	18,9	16,0	16,9	20,7	20,8
Bad	4,3	4,3	3,5	3,7	5,0	4,8
Very bad	0,9	0,5	1,0	0,4	0,8	0,5
Total	100	100	100	100	100	100

## References

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