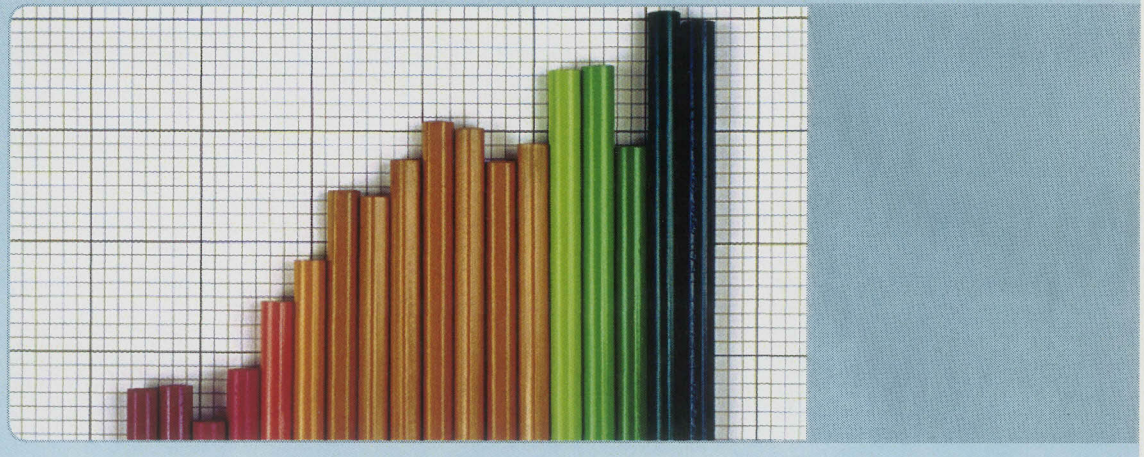
FEDERAL PUBLIC SERVICE ECONOMY, SMES, SELF-EMPLOYED AND ENERGY
General Direction Statistics and Economic Information

EU-SILC 2004
Overview and Results



Statistics on income and living conditions

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EU-SILC 2004 – Statistics on Income and Living Conditions
Overview and results

PART 1: OVERVIEW

PART 2: RESULTS

PART 1: OVERVIEW

I. EU-SILC: General issues

"EU-SILC" is the short term for "*European Union Statistics on Income and Living Conditions*". It is a *new statistic* at Statistics Belgium as from 2003.

♦ From PSBH/ECHP to EU-SILC

EU-SILC is the successor of the *Panel Study of Belgian Households*.[1] This was a panel survey conducted by the universities of Antwerp and Liège during more than ten years. Although the survey was done in a European context, there was no European Regulation that organized the survey. Countries were not obliged to organize the survey, so not all of the Member States did.
At European level it was decided to stop the panel and to launch a new project. Various reasons grounded this decision, for example: the sample of households that had become smaller with the years, the change in priorities in the domain of social policy that leaded to changes of the content of the survey.
For Belgium it was decided that Statistics Belgium would play a key role in the organization of the new project.
EU-SILC is organized in all EU Member States and is being coordinated by EUROSTAT.

♦ The importance of EU-SILC

On the one hand the SILC will be of interest for scientific research, on the other statistical information on income and living conditions is necessary for social policy makers. One of the goals is to make indicators in the field of poverty and social exclusion. We believe that different researchers at universities, the public sector in Belgium and the European Union will welcome the results of this survey.

[1] For more information we refer to the final report of the research project "Sociaal-economisch en demografisch panel": Mortelmans, D., Casman M.T., Doutrelepont, R. (ed.), 2004, *Elf jaar uit het leven in België.Socio-economische analyses op het gezinsdemografisch panel PSBH*, Gent, Academia Press, 615p.

II. EU-SILC 2003/ 2004-2007 in a European context

♦ EU-SILC 2003

6 Member States (Belgium, Denmark, Greece, Ireland, Luxemburg, Austria) and Norway organized EU-SILC in 2003 on the basis of a gentlemen's agreement.

♦ EU-SILC 2004

From 2004 on EU-SILC is based on a European Regulation (see annex 1):
Regulation (EU) No 1177 of the European Parliament and of the Council of 16 June 2003 concerning Community Statistics on income and living conditions (EU-SILC)

- *Aim* = to establish a common framework for the systematic production of a statistic that is to become the reference source of comparative statistics on income distribution and social exclusion at the European Union level;
- *Data* = cross-sectional and longitudinal (first and clear priority is the delivery of timely and comparable cross-sectional data);
- *Variables* = the primary domains are described in the European Regulation and the target variables in a related commission regulation;
- *Sample* = for each country a minimal effective sample size is fixed in the Regulation.

III. EU-SILC 2004 in Belgium

♦ Preparation of the survey

The main part of the preparatory work took place from January 2004 until August 2004 and consisted of:

- developing questionnaires, manuals and other documentation,
- programmation in Blaise and testing of the developments,
- delivery and installation of the laptops,
- selection of interviewers,
- sampling,
- creation and sending of letters to households,
- management of the 'Before Survey' program in Blaise, etc.

Sampling Design

- The Belgian EU-SILC 2004 survey is a 2-stage sampling.

There is stratification of sampling units.
There is no clustering of sampling units.

- The stratification criterion is the region (NUTS2 level). The strata are the 10 provinces of Belgium and the Brussels Capital Region.

- The *Primary Sampling Units* are the municipalities (or part thereof in the larger ones); in each of the 11 strata, they were drawn PPS, i.e. with repetitions allowed (for instance, Schaerbeek was drawn 6 times). In total, 275 draws were made.

- The *Final Sampling Units* are the (private) households. For each PSU draw, 40 households were selected (for instance, 240 households in Schaerbeek), systematically according to the reference person's age. These 40 households were then randomly renumbered from 1 to 40, the first ten (1 to 10) leaving the survey[2] after 1 year, etc. The initial sample size was 11000.

- Sample size and allocation criteria: a first allocation was made between the three NUTS1 regions (roughly proportional to the square root of the their population); within the two largest NUTS1, the apportionment to their five NUTS2 was designed to yield[3] a number of respondents nearly proportional to the number of households.

Table 1: sample size and achieved response by NUTS2-units

NUTS2	Name	Drawn	Accepted (DB135=1)
BE10	Brussels	2000	729
BE21	Antwerpen	1720	907
BE22	Limburg	640	339
BE23	Oost-Vlaanderen	1280	609
BE24	Vlaams-Brabant	1040	456
BE25	West-Vlaanderen	840	443
BE31	Brabant Wallon	320	102
BE32	Hainaut	1520	745
BE33	Liège	1000	535
BE34	Luxembourg	240	166
BE35	Namur	400	244
Total	**Belgium**	**11000**	**5275**

- Renewal of sample: Rotational groups. In 2004, Belgium launched the first rotational wave.

Interviewer selection

Interviewers were selected from the interviewer database that Statistics Belgium has centralised for all the survey's that are carried out by the institute. For each interviewer a basic curriculum vitae is present in the database (mentioning for example for which surveys they have experience, their language knowledge, their knowledge of pc, ...). A specific unit at Statistics Belgium ('Unité Corps Enquêteurs') is occupied with the selection of the interviewers for each survey; they have good contact with and knowledge of the interviewers. They try to find the best interviewer for each of the geographical areas to cover for SILC. This is not always an easy task

[2] To be replaced in 2005 by new households in the same PSU.

[3] Based on past experience

because for certain geographical areas several interviewers are candidate, but for other geographical unit there are few or no candidates. Note that interviewers in Belgium most often carry out this work as a second or casual occupation.
Since the SILC-survey succeeded the PSBH (Belgian ECHP), which was carried out by another institute (University Antwerp and University Liège) than Statistics Belgium, we also asked both Universities to inform the former PSBH-interviewers on the possibility to become an interviewer for the new SILC-survey. Several interviewers were also recruited through that way.

Interview training (Number of training days and information on the intensity and efficiency of interview training)

We invested once more this year in a two day formation for all interviewers, including for those who worked for SILC 2003. (Overall we had the impression that the working-experience of the interviewers with EU-SILC starts to pay of. In our opinion the basis data were (much) better for SILC 2004 than for SILC 2003.)
. A training group consisted of minimum 5 to maximum 20 interviewers, and according to the size of the training group there were 1 or 2 trainers.
Even though the accent was given to the practical side of the training (getting to know the questions and mastering the CAPI-program by imitating interview situations), three manuals were distributed and explained during the training:

- A general manual ('Manuel general aux enquêteurs') containing information about the objectives of the survey, the organisation of the survey, legal and administrative aspects around the survey, fieldwork aspect (how to contact the household, how to introduce oneself, who answers which questions, time delays, ...) and the content of the questionnaires.
- A second manual ('Manuel contenu') with all kinds of additional explanations and examples for certain questions/answers.
- A third manual ('Manuel CAPI') about the use of the portable PC for the SILC Computer Assisted Personal Interviews and about the data entry program itself.

The first day of the training there was half a day for learning about and discussing the first two manuals. In the afternoon the trainees received their laptop and got to know the survey and the tool to carry out the interview in practice. One test-interview was simulated collectively. The second day of the training a small part of the time was dedicated to testing to send the data electronically after carrying out the interview. All the rest of the day interviewers practiced several interviews and interview situations with each other on the basis of household profiles that were given. There was also a lot of time for questions and discussions in between these test-interviews.
At the end of the training sessions the instructors had a good image on the degree in which each interviewer ameliorated during the training and on the degree in which they mastered the work. For certain interviewers two days of training was more than enough to master the work, for others it was necessary that they practiced some more at home on specific aspects of carrying out this survey (for example using of the CAPI-program itself, working on the content of the survey, ...). They were recommended to do so before carrying out their first real interview. They were often also recommended to start interviewing one-person households.

♦ **Characteristics of the fieldwork**

During the fieldwork not only the interviews took place, but several coordinating tasks were done: responding to the questions of the interviewers, the households (free number), sending of data electronically to the SILC-server, the management of the 'After Survey' program in Blaise, etc.

Fieldwork period
The fieldwork took place from September to December 2004.

Number of households by interviewer
The secondary units consisted of 40 households. Most of the interviewers had one group of households. Nevertheless several interviewers also had more groups:
interviewers with 1 group: 102
interviewers with 2 groups: 45
interviewers with 3 groups: 18
interviewers with 4 groups: 2
interviewers with 5 groups: 3

CAPI-interview
CAPI (*Computer Assisted Personal Interview*) are being carried out. This method consists in gathering the information from the households by introducing it directly into an electronic format. It has several advantages such as a smoother fieldwork (automatic routing) with a shorter interview duration, the use of automatic controls when entering the data which gives better data quality, results are sooner available, etc.

Compensation for the households
The households participate at the survey on a voluntary basis and receive an allocation of 30 euro in compensation of the time and effort that they have given.

Evaluation of the duration of the interview and the level of difficulty of the questions

At the end of the interview, the household contact person was asked the following two evaluative questions:

> *We would like to thank you for your co-operation. We are at the end of the questionnaire.*
> *For the evaluation of this questionnaire we would like to ask following questions.*
>
> *1. How easy or difficult did you find the answering of the questionnaire in general?*
> *Very difficult (code 1)*
> *Difficult (code 2)*
> *Not difficult but neither easy (code 3)*
> *Easy (code 4)*
> *Very easy (code 5)*
>
> *2. What do you think of the length of the questionnaire?*
> *Too long (code 1)*

Neither too long neither too short (code 2)
Too short (code 3)

In tables 2A and 2B the distribution of the answers on these questions are presented.

Table 2A : Opinion on degree of difficulty of the questionnaire

	N	%
Very difficult	43	0,8
Difficult	269	5,1
Neither difficult/ Nor easy	1729	32,8
Easy	2814	53,30
Very easy	407	7,7
missing	13	0,2
total	5275	100

Table 2B : Opinion on the duration of the interview

	N	%
Too long	379	7,2
Neither too long/ Neither too short	4768	90,4
Too short	116	2,2
missing	12	0.2
total	5275	100

For the majority of the participating households (53,30%), the questions were easy to interpret. For 90% of the households the interview was neither too long, nor too short.

As an evaluation after the survey we have sent the households and the interviewers each a different evaluation questionnaire.
The following results give a clear idea of the fact that relations between interviewers and respondents are good and that interviewers can answer questions of the respondents quite easily.

There were 3826 households, thus 72.5 % of the interviewed households, which answered the evaluation questionnaire. Among them 38 households (less than 1 %) found that they did not have sufficient explanation about the survey.
Here are the results of the questions about what households thought of their interviewer:

Table 3. Evaluation of the interviewer by the households

Do you think the interviewer:	Number of households who answered Yes:	%
Was friendly	3583	93,6
Was clear, precise	3194	83,5
Had a good knowledge of the study	2664	69,6
Was patient	2601	68
Was hurried	56	1,5
Was impolite	29	0,7

♦ **Data processing**

The main part of the work on data processing took place from December 2004 until December 2005 (Processing survey data, Evaluation of interviewers, Payments of interviewers and households).

The steps in processing of the collected information are the following (a more detailed description can be found annex 3):
A *first phase* consisted of transforming the Blaise dataset into a usable SPSS dataset. Further, for a few variables correction and/or coding was necessary.
This phase was followed by a *second phase* of extensive work on *imputation* for missing, inconsistent or incorrect *income data*. For further detail, see Annex 2- Integration of outlier detection- , imputation- and control-phases.
Also, certain *other survey data* (such as company car) needed extra processing work.
Further, weighting factors were calculated and the *Eurostat target variables* were created.
After running a *final checking program* of Eurostat and carrying out the necessary corrections, the *Laeken indicators* were produced and a quality report was created.

♦ **Data distribution**
For this topic we refer to the document "Handleiding-Manuel EU-SILC 2004".

Annex 1. European Regulations concerning EU-SILC

- **Regulation** (EU) No 1177 of the European Parliament and of the Council of 16 June 2003 concerning **Community Statistics on income and living conditions** (EU-SILC);
- **Commission Regulation** (EC) No 1980/2003 of 21 October 2003 implementing Regulation (EC) no 1177/2003 of the European Parliament and of the Council concerning Community Statistics on income and living conditions (EU-SILC) as regards **definitions and updated definitions**;
- **Commission Regulation** (EC) No 1981/2003 of 21 October 2003 implementing Regulation (EC) no 1177/2003 of the European Parliament and of the Council concerning Community Statistics on income and living conditions (EU-SILC) as regards **the fieldwork aspects and the imputation procedures**;
- **Commission Regulation** (EC) No 1982/2003 of 21 October 2003 implementing Regulation (EC) no 1177/2003 of the European Parliament and of the Council concerning Community Statistics on income and living conditions (EU-SILC) as regards **the sampling and tracing rules**;
- **Commission Regulation** (EC) No 1983/2003 of 21 October 2003 implementing Regulation (EC) no 1177/2003 of the European Parliament and of the Council concerning Community Statistics on income and living conditions (EU-SILC) as regards **the list of target primary variables**;
- **Commission Regulation** (EC) No 28/2004 of 5 January 2004 implementing Regulation (EC) no 1177/2003 of the European Parliament and of the Council concerning Community Statistics on income and living conditions (EU-SILC) as regards the detailed content of intermediate and final **quality reports**;
- **Commission Regulation** (EC) No 16/2004 of 6 January 2004 implementing Regulation (EC) no 1177/2003 of the European Parliament and of the Council concerning Community Statistics on income and living conditions (EU-SILC) as regards **the list of target secondary variables relating to the 'intergenerational transmission of poverty'**(Module 2005);
- **Commission Regulation** (EC) No 13/2005 of 6 January 2005 implementing Regulation (EC) no 1177/2003 of the European Parliament and of the Council concerning Community Statistics on income and living conditions (EU-SILC) as regards **the list of target secondary variables relating to 'social participation'** (Module 2006);

Annex 2. Integration of outlier detection- , imputation- and control-phases.

For SILC-2004 we adopted a more 'integrated strategy' to organise the detection of outliers and the imputations. Crucial to the understanding of our way of working are the concepts of what we call 'vertical' and 'horizontal integration'.

By 'vertical integration' we mean that the phases of outlier detection and imputation were done together for each variable separately (1) rather than that both phases were done separately for all variables together (2). The differences between (1) – the way we did things for SILC 2004 - and (2) the way it was done for SILC 2003 – are subtle but nevertheless more than semantics, especially when combined with horizontal integration.

By horizontal integration we mean that information for each respondent on one variable was checked against information on another variable or another source. Information on the monthly gross income for example was – if both possible and applicable- checked with information on the net income, the yearly income, the current income (if no changes had occurred), the household income, other 'proxi'-variables to income (status etc…) and very important external sources of information like legislation.

The interplay between what we call vertical and horizontal integration leads to a dynamic strategy: variables are checked for outliers and inconsistencies, variables are compared to each other and corrected, (corrected) variables are immediately imputed consistently to the information in other (also corrected) variables – and this several times repeated.

We believe that the emphasis of this strategy on consistency of internal information for respondents throughout the survey and the use of external sources of information (legislation) is a far more successful way of detecting outliers and imputing missing values compared to methods of screening for outliers entirely based on (univariate) distributional features of variables (box-plot methods for example) and imputation methods mainly based on statistical probability models (IVE for example).

Outlier detection

The shift in strategy also implies – of course - a shift in the techniques that are used. As far as the outlier detection concerns there is far less emphasis on univariate - purely distributional related methods like box-plots but more emphasis on inconsistency checks. For the income variables these checks were done in 2 ways: i. comparison of ratio's between variables and ii. comparison of the relative position of a respondent's answer on one variable to its position on another variable.

- Comparison of ratio's between variables:

  Comparison of the ratio between two inputs on comparable income variables is a straightforward way to detect outliers. Atypical large or small ratios between

gross and net variants of income variables are obviously an indication of 'something being wrong'.

- Comparison of relative positions on income variables:

  The central issue in this procedure is the comparison of two income variables by comparison of the normal scores calculated for each case on both variables, after log-transformation. The log-transformation is necessary to normalize the otherwise poisson-distributed income variables.
  The inputs of both comparable incomes are considered to be consistent if both normal scores are within predefined boundaries (for example -1,96 and 1,96) and/or the difference between the normal scores is limited (less than 1,96).
  There is an indication of bias if the input of one of the incomes for a case is situated within 'normal boundaries' (-1.96 – 1.96) but the other input is not and/or if the difference between the two normal scores differ substantially (>1.96). In fact, the entire procedure consist out of 4 steps:
  1. Identification of the variables to be compared.
  2. Log-transformations, normality checks, calculation of means and standard deviations.
  3. Calculation of normal scores.
  4. Consistency control and identification of inconsistencies.

- Other techniques :

  There was more emphasis on these techniques but this does not imply that the 'conventional' box-plot method was not used at all. In this method input outside the interval below were considered to be outliers:
  [First Quartile – 1,5 * (Third Quartile – First Quartile) ; Third Quartile + 1,5 * (Third Quartile – First Quartile)]

  Furthermore and as already mentioned, where applicable and usable legal maximums and minimums were also used to some extent.

  Finally, we also checked for outliers via controls on a 'case to case' base in which we maximally used information of proxi-variables like professional status and other variables. In this process manifest errors in proxi- and/or other variables associated with the income variables were also removed/corrected (for example 'the number of months').

Imputation

As already mentioned, imputation techniques like IVE were less used than in 2003. Instead we i. corrected (not imputed – in fact) a greater number of cases and if correction was not desirable or possible, but information on a directly comparable variable was present anyway, we ii. resorted to direct imputation, via a regression model.

i. Corrections.

Corrections were also mainly done on basis of information in other comparable variables. Gross-net ratio of around 40 - 1 Euro = +/- 40Belgian Francs - or 12 - yearly income entered as monthly or vice versa - lead to simple corrections of the gross or the net, for example.

ii. Regressions.

If correction was not desirable or possible but information on a directly comparable variable was present anyway, we resorted to direct imputation, via a regression model, of the variable for which input was missing. Below we describe how this was done for net –gross imputation, which were the most prevalent instances of that sort. The method was extended, however, to other imputations (imputations of the 2003 income based on the current income, for example).

Missing values on gross income variables (PY010G, PY020G, ... and components) were, if collected, imputed on the basis of the corresponding net variables (PY010N, PY020N, ... and components). The implementation of this imputation procedure was quasi-similar for almost all (income) variables on which it was applied. The procedure implied 6-steps:

1. Identification of the 'reference cases' (both gross and net collected) and identification of the cases to be imputed (net collected – gross missing).
2. Calculation of the gross/net ratio for the reference cases. Cases with an extreme value on this ratio were excluded from further use in the procedure.
3. Curve estimation of the relation (regression model) between gross and net income. The best fitting model (linear, logarithmic, quadratic, exponential) was being implemented.
4. Implementation of the regression model for the reference cases to identify outliers.
5. Re-implementation of the regression model for the reference cases after removal of the outliers.
6. Actual imputation step: missing (gross) values are imputed on the basis of
    a) net values and
    b) the estimates for the relation between gross and net income assessed in the steps above.

In step 1 the cases of which both gross and net income were collected are identified. We refer to these cases as 'reference cases' (step 1). The relationship between their net and gross income serves as reference for the imputation of the gross incomes for the cases where only the net was collected (cases to be imputed).

To avoid bias in this imputation model atypical reference cases (both outliers and errors) were identified and removed at several steps in the procedure (step 2 and 4).

In step 2 (reference)cases for whom the ratio between gross and net income exceeded what can be considered typical for the taxation regime applicable to the income concerned, were excluded.
In the case of almost all variables the boundary value of this ratio was set at 2,5. This boundary was arbitrary chosen.
Scrutiny of the excluded cases, however, validates this value's potential to discriminate between incomes which were subjected to real(istic) taxation and outliers or errors.
The latter category seldom counted more than a few percent of the total population in the survey and their gross/net ratio often exceeded the 2,5 considerably.
Further exploration also revealed that the exclusion of these cases from the procedure results in a dramatic increase of the fit of the regression model on which the imputation is based.

In step 4 outliers in the regression model were identified and removed using default regression diagnostics.

The underlying probability model of the net-gross relation was assessed with SPSS' 'curve-estimation' procedure (step 3). It can be hypothesised that in most taxation schemes this relation will not be linear as higher revenues will be subjected to disproportionate higher taxes. The concern therefore is that application of a linear regression model may lead to biased result. Step 3 is an answer to that concern, which turned out to be unfounded, however. In fact, for most variables the linear model fitted the data well. For a few variables the fit of the quadratic model was slightly better, however. Overall, and we underline this, the fit was very good and R-squares very high (always > 0.85)

The estimates of this regression model (step 5) served as direct input for the implementation of the actual imputation (step 6).

iii. Other techniques.

Although we preferred the techniques above we were in some instances forced to resort to other techniques (due to lack of information – for example).

For some cases we imputed median values calculated after categorising using relevant variables. Most of the median values imputed, were for example, calculated after categorisation for status.

Description on imputation per target variable

In the following table is shown which imputation method we used for each target variable (and also for each component within the Belgian questionnaire). The percentage of imputed cases and the total number of observations is added.

Percentage of imputation over the total number of observations per (target) variable

Income Component		Question in the Belgian questionnaire		Percentage imputed cases (total number of observations)	Method
Code	Description	Code	Description		
HY040	Income from rental of a property or land	B_HY040G_1	Rental of a part of the house	24 (25)	Median of the given amounts
HY040	Income from rental of a property or land	B_HY040G_2	Rental of property or land other than own house	5.7 (367)	Hot deck (imputation of a randomly drawn given amount)
				3.7 (367)	Intervals: imputation of the median of the given amounts
HY040	Income from rental of a property or land			9.9 (385)	
HY050	Family/child ren related allowances	B_HY050G_1	Child allowance	2.6 (1869)	Regression with number of children and age of the oldest child as auxiliary variables
HY050	Family/child ren related allowances	B_HY050G_2	Birth grant	12.2 (147)	Median of the given amounts (in classes based on number of children)
HY050	Family/child ren related allowances	B_HY050G_3	Income maintenance benefit in the event of childbirth	33 (144)	Imputation IVE : auxiliary variable salary of last year (2002) or salary of last month and no change since 2002
				9 (144)	Imputation based on legal amounts for self-employed
		B_HY050_4		39.6 (144)	Number of months modified based on the calendar
HY050	Family/child ren related allowances	B_HY050G_5	Parental leave benefit	100 (30)	Imputation of legal amounts
HY050	Family/child ren related allowances			9.8 (1878)	

HY060	Social assistance			4.1 (146)	Legal amounts
HY070	Housing allowance	B_HY070G_1	Allowance for housing (tenants)	22.9 (48)	Imputation based on current rent
				2.1 (48)	Median
HY070	Housing allowance	B_HY070G_2	Intervention of authorities for repayments on mortgage	25 (40)	Median
				10 (40)	Legal amounts (bounded by current repayment on mortgage)
HY070	Housing allowance			29.4 (88)	
HY080	Regular inter-household cash transfer received	B_HY080G_1	Alimony and child support received	1.3 (233)	Median
HY080	Regular inter-household cash transfer received	B_HY080G_2	Regular cash support	13.1 (137)	Hot deck
HY080	Regular inter-household cash transfer received			5.9 (358)	
HY090	Interests, dividends, etc.			55.2 (3562)	Regression (auxiliary variables: sort assets (bank accounts, bonds,...), tenure status, subjective rent)
				19 (3562)	Ranges of values: regression with bounds
HY110	Income received by people aged < 16			16.7 (12)	Median
HY130	Regular inter-household cash transfer paid	B_HY130G_1	Alimony and child support paid	8 (236)	Imputation of number of months (amounts were given)
HY130	Regular inter-household	B_HY130G_2	Regular cash support	9.6 (249)	Hot deck

	household cash transfer paid				
HY130	Regular inter-household cash transfer paid			9.1 (470)	
HY140	Tax on income and social contributions	B_HY140G_1	Repayments for tax adjustment	10.3 (2523)	IVE (auxiliary variables: number of children, yearly gross income in 2003, current economic status, status in employment, more than one job or not, limits as log(minimum of the given repayment values) and log (maximum of the given values)
HY140	Tax on income and social contributions	B_HY140G_1	Receipts for tax adjustment	7.3 (2256)	IVE (auxiliary variables: number of children, yearly gross income in 2003, current economic status, status in employment, more than one job or not, limits as log(min of the given receipts values) and log (max of the given values)
HY140	Tax on income and social contributions			50 (4726)	Tax was computed as the sum of all differences between gross and net in income variables, corrected by tax adjustment. In case a gross-net model or a net-gross regression was used, the difference (tax) was considered as imputed.
PY010	Employee cash income	B_PY010G_11	Wages and salaries	0.8 (4756)	1) Corrections
				4.7 (4756)	2) Net income is given, imputation based on regression
				6 (4756)	3) current income is given, imputation based on regression
				0.1 (4756)	4) yearly income is given, imputation based on regression
				3.2 (4756)	5) If the above is not possible, IVE (auxiliary variables: age, gender, ISCED level, PL030, PL040, PL070, PL072, PL110, PL130, PL140, PL150, PL160)

PY010	Employee cash income	B_PY010N_41	Pay for overtime	49.2 (244)	IVE (auxiliary variables: age, gender, ISCED level, monthly and yearly wages in 2002 (gross and net), current economic status, status in employment, NACE)
PY010	Employee cash income	B_PY010N_42	Commissions	37.3 (59)	Median
PY010	Employee cash income	B_PY010N_43	Tips	43.3 (30)	Median
PY010	Employee cash income	B_PY010N_44	Additional payments based on productivity	38.1 (113)	Median
PY010	Employee cash income	B_PY010N_45	End of the year payments	13 (2959)	IVE (auxiliary variables: same as pay for overtime)
PY010	Employee cash income	B_PY010N_46	Thirteenth month payment	13.8 (717)	Regression with gross monthly wage as auxiliary variable
PY010	Employee cash income	B_PY010N_47	Fourteenth month payment	17.3 (52)	Median
PY010	Employee cash income	B_PY010N_48	Holiday payments	12.4 (3872)	IVE (auxiliary variables: same as pay for overtime)
PY010	Employee cash income	B_PY010N_49	Profit sharing	27.4 (135)	Median
PY010	Employee cash income	B_PY010N_410	Shares	70.8 (65)	Median
PY010	Employee cash income	B_PY010N_411	Allowances paid for working in remote locations	33 (75)	Median
PY010	Employee cash income	B_PY010N_412	Other additional payments	13.1 (160)	Median
PY010	Employee cash income	B_PY010G_2	Income from irregular jobs : wages and salaries	2.8 (351)	1) corrections
				33.0 (351)	2) net income is given and regression net-gross
				31.1 (351)	3) other imputations: in this category all sorts of imputations are gathered which do not fit in other categories (here or in other parts of PY010). It concerns mostly respondents with small earnings. The relatively high

					number of cases in this category stems from shifts from inputs in I47 to I53 (on basis of status-variables- for example: a retired respondent earning something on the side).
PY010	Employee cash income	B_PY010G_32	Income from jobs other than main job : wages and salaries	6.9 (116) 4.3 (116) 23.3(116)	1) monthly income is given and number of months in 2003 2) net income is given and regression net-gross 3) imputation of median income by type of the additional job (employee public or private sector or without status)
PY010	Employee cash income			31.4 (4899)	
PY050	cash benefits or losses from self-employment		Income for main job : self-employed	49,4 (413) 15.0 (413) 1.0 (413)	1) imputation on basis of the household income 2) imputation of median values on basis of type of business 3) correction For more elaborate information on the imputation of the self-employed – See text below!!!
PY050	cash benefits or losses from self-employment		Income for jobs other than main job : self-employed	5.0 (100) 5.0 (100) 30.0 (100)	1) monthly income is given and number of months in 2003 2) net income is given and regression net-gross 3) imputation of median income by type of the additional job (self-employment)
PY050	cash benefits or losses from self-employment			62.1 (501)	
PY080	Pension from Individual private plans		Savings for ones old day (Epargne-pension)	71.4 (14)	Conversion lump sum to annuity
PY080	Pension from Individual private plans		Life insurance (Assurance-	71.4 (7)	Conversion lump sum to annuity

			vie)		
PY080	**Pension from Individual private plans**			**66.7 (18)**	
PY090	**Unemployment benefits**	**B_PY090G_11**	**Subsistence income for persons entering the labour market**	**26.3 (19)**	**Net-gross model**
PY090	**Unemployment benefits**	**B_PY090G_12**	**Full unemployment benefits**	**3.3 (899)**	**1) Corrections: number of months : calendar, 12 months if no change, …**
				24.1 (899)	**2) Net income is given, imputation based on regression**
				0.8 (899)	**3) current income is given, imputation based on regression**
				0.6 (899)	**4) imputation based on legal amounts**
				2 (899)	**5) random imputation: median in classes based on the situation of the person in the household (one-person household, partner has income or not, dependent children or not, ….)**
PY090	**Unemployment benefits**	**B_PY090G_13**	**Partial unemployment benefits**	**14.5 (62)**	**1) correction: number of months : calendar, …**
				21 (62)	**2) Net income is given, imputation based on regression**
				1.6 (62)	**3) current income is given, imputation based on regression**
				3.2 (62)	**4) imputation based on legal amounts**
PY090	**Unemployment benefits**	**B_PY090G_14**	**Other financial assistance (Allocation de garantie de revenus)**	**26.3 (38)**	**1) Net income is given, imputation based on regression**
				5.3 (38)	**2) imputation based on legal amounts**
PY090	**Unemployment benefits**	**B_PY090G_15**	**Other financial assistance**	**26.1 (23)**	**1) Net income is given, imputation based on**

			(Allocation du fonds de sécurité d'existence)	13 (23)	regression 2) imputation based on median in classes
PY090	Unemployment benefits	B_PY090G_16	Vocational training allowance	23.5 (17)	1) Net income is given, imputation based on regression
				5.9 (17)	2) imputation based on median
PY090	Unemployment benefits	B_PY090G_17	Allowance for child care/ mobility payments	0	All cases were placed in B_PY090G_18 because the amounts did not match the legal amounts and it was thought that the given amounts concerned other (unknown) sorts of unemployment benefits.
PY090	Unemployment benefits	B_PY090G_18	Other cash benefits	36.7 (30)	1) Net income is given, imputation based on regression
				3.3 (30)	2) imputation based on legal amounts
				3.3 (30)	3) correction of specific value
PY090	Unemployment benefits	B_PY090G_2	Early retirement benefits	27.8 (187)	1) net is given (regresion net-gross)
				0.5 (187)	2) last month value is given
				2.1 (187)	3) hot deck in classes based on gender, age and former economic status
		B_PY090G_22		2.1 (187)	4) correction: number of months
PY090	Unemployment benefits			33.6 (1264)	
PY100	Old age benefits		Pension Fund (Fonds de pension)	6.1 (82)	Monthly interest was given as annuity.
				7.3 (82)	Conversion lump sum to annuity
				8.5 (82)	Random imputation

PY100	**Old age benefits**		**Group insurance (Assurance-groupe)**	**10 (10)**	**Monthly interest was given as annuity.**
				30 (10)	**Conversion lump sum to annuity**
PY100	**Old age benefits**	**B_PY100_G_1**	**Old age pensions**	**27.3 (1555)**	**Net pension is source**
				6.6 (1555)	**current pension is source**
				4.1 (1555)	**imputation via IVE**
				1.9 (1555)	**correction**
PY100	**Old age benefits**		**Other financial assistance to old aged people[4]**	**100 (5)**	**Net pension is source**
PY100	**Old age benefits**		**Other financial assistance to old aged people[5]**	**100 (6)**	**Net pension is source**
PY100	**Old age benefits**		**Type of old age benefits not given**	**63.6 (22)**	**Net pension is source**
				18.2 (22)	**current pension is source**
				13.6 (22)	**correction**
PY100	**Old age benefits**			**40.4 (1814)**	
PY110	**Survivor's benefits[6]**	**B_PY110G_1**		**26.5 (370)**	**Net pension is source**
				9.2 (370)	**current pension is source**
				5.9 (370)	**imputation via IVE**
				1.4 (370)	**correction**
PY120	**Sickness benefits**		**Paid sick leave (temporary inability to work due to sickness)**	**26.7 (131)**	**1) Net income is given, imputation based on regression**
				4.6 (131)	**2) current income is given, imputation based on regression**
				5.3 (131)	**3) imputation based on legal amounts**

[4] Revenus garantis aux personnes âgées

[5] Complément au revenu garanti aux personnes âgées

[6] Individuals could answer 'yes' to the filter of the question about survival pension and be more than 65 years. After imputation, the values of the benefits were classified as old-age benefits.

					amounts
				3.1 (131)	4) corrections
PY120	Sickness benefits		Paid sick leave (temporary inability to work due to professional sickness or injury)	29 (31)	1) Net income is given, imputation based on regression
				3.2 (31)	2) Median (1 case)
PY120	Sickness benefits		Other sickness benefits	25 (12)	1) Net income is given, imputation based on regression
				25 (12)	2) Corrections
PY120	Sickness benefits			40.5 (163)	
PY130	Disability benefits		Disability pension	29.9 (274)	1) Net income is given, imputation based on regression
				10.6 (274)	2) current income is given, imputation based on regression
				2.2 (274)	3) corrections based on last month household income
				1.1 (274)	4) hot deck (similar cases: age, former professional status, activity sector)
PY130	Disability benefits		Integration income for the handicapped	28.6 (35)	1) net is given
				5.7 (35)	2) imputation of legal amounts
PY130	Disability benefits			43.5 (299)	
PY140	Education-related allowances	B_PY140G_1	Grants, scholarship and other educational help to pupils (of secondary schools)	7.2 (125)	Hot deck
PY140	Education-related allowances	B_PY140G_2	Grants, scholarship and other educational help to students (of	8.2 (73)	Hot deck

			colleges)		
PY140	**Education-related allowances**			**7.4 (188)**	
PY200	**Employee cash income - CURRENT**	**B_PY200N**	**Wages and salaries**	**0.1 (4207)**	**1) Corrections**
				8.2 (4207)	**2) Net income is given, imputation based on regression**
				2.7 (4207)	**3) income 2004 is given, imputation based on regression**

Additional remarks on imputations.

- **Imputation of the self-employed.**

The imputations for the income of self-employed persons are based on 3 sources of information:

- Characteristics of their business: (industry or trade, agricultural business ...) and type of management (one-man business, with associates, family business) (TYPMIS)
- Business results in 'the books' : (RESMIS)
- Advance tax -payments and social contributions : (TAXMIS)

Respondents can have item non-response for one or several of these variables:

TYPMIS	RESMIS	TAXMIS	
		0	1
0	0	115	28
	1	4	169
1	0	0	0
	1	0	97

TYPMIS = type missing ? with 0 = not missing and 1 = missing
TAXMIS = taxes missing? with 0 = not missing and 1 = missing
RESMIS = result missing? with 0 = not missing and 1 = missing

- On the basis of the above table cases can be categorised:

1. 115 cases with complete information = TYPE1
2. 169 cases with only information on the type of business = TYPE2.
3. 97 cases for which all information is absent = TYPE 3.
4. 28 cases with only an entry on I78A and I78B = TYPE 4.

5. 4 remaining cases not to be categorised in the above categories = TYPE 4.

- And for each type there is a solution:

1. TYPE 1: no imputation necessary

2. TYPE 2: imputation based on H66 – the household income. After deduction of the incomes of the other family members the remaining income is considered to be the net-income of the self-employed person in the household. For cases for which H66 is missing. Imputation of median incomes – based on the incomes of TYPE 1 cases and the type of the business.

3. TYPE 3: First imputation of the type of business via random allocation based on the distribution of types of businesses of the type 1 cases. After this , this type completely coincide with type 2. The same procedure was implemented.

→ 204 cases were imputed on basis of the householdincome/ 62 via the median based on type 1

4. TYPE 4: The inputs on I78A and I78B were considered to be a gross income. Calculation of net income was done by a gross-net regression based on TYPE 1 cases.

5. TYPE 5: correction/imputation of a specific value (mostly on basis of the householdincome).

Please note that regression analysis based on the inputs of TYPE 1 was used to estimate net incomes if the gross income was given and vice versa.

- **Control and correction of variables PL070-PL090 (number of months spent at/in ...).**

It was our experience that these variables need special attention and care because mistakes and inconsistency may occur easily. We therefore invested quit some time and energy in the creation, control and correction of the variables. To create PL070-PL090 we combined information of several sources:

the calendar in the questionnaire

the number of months spent in a status as it is asked in the questionnaire.

PY010 ... : the income variables and the variables at the basis of these (see table above). If – for example – a large amount is given in certain income variable this obviously implies that some months were spent in the corresponding status.

Variable PL030: the self-defined status

For some cases, the information from these variables was conflicting. If this was the case priority was given to the variables as they are ranked above but not 'blindly' – afterwards we controlled explicitly – and in some cases information from certain variables was overruled (never from the calendar however).

In addition to the time we invested explicitly in the creation and control of these variables we need to count the time we spent implicitly working on these variables as this work obviously was an important part of the integration we explained above (inconsistencies between input on income variable and the variables assessing the number of months in a status - for example)

The need for extra control in the creation of PL070-PL090 is shown in the missing of information on the PL210-variables (status in January, February, ...) for 386 cases. For these cases we detected via combination of information stemming from the above variables that there has been at least one change in status during the reference-period without that the calendar was filled in. For almost all these cases we were able to assess the correct number of months spent in the several statuses but the exact timing of the change (which month it occurred) was missing. Obviously we can not assess PL210 for these cases.

- **Gross/Net imputations.**

For a limited number of monetary variables a limited number of respondents had given only a value for the gross variant of the variable (the opposite – only net is given - occurred much more). For these cases a net value was imputed on basis of the gross using the Belgian rules of taxation. A small number of net- pensions and unemployment benefits were imputed in this way.

- **Imputation of partial unit non-response**

The method chosen for Belgium was imputation of an income for each member of the household who did not answer the questionnaire. Imputation is based on the variable 'basic activity status' (RB210) of the individual given in the R-file. When the answer is missing or 4 'other inactive person', it is chosen not to impute any income. The method for imputation differs with the categories: imputation based on a regression for the wages (no difference between employee and employer, independent variables are age and gender), imputation of a sub-category median for the unemployment and retirement incomes. Net incomes were computed with a gross to net model, based on the imputed gross incomes.
HY025 is calculated as total net disposable income including these individual imputed incomes divided by HY020.

- **Collection variable company Car**

The benefit for individuals of using a company car for private goals was not directly assessed at the interview but afterwards calculated by applying the applicable taxation rules.
The fiscal benefit of all nature that a person has - due to disposition of a company car for private goals - is calculated by multiplying the number of kilometres driven for private use by a coefficient. To calculate the latest we need the cylinder capacity of the car. Unfortunately we only asked the mark, type and registration year of the car. Following Eurostat, with these information we could use the method of valuation on the basis of accrued savings. The benefit equals the sum of :

1. depreciation over the reference period in the capital value of the car, plus
2. coverage by the employer of other costs which would normally fall on the user of his/her own car.

The problem for Belgium with this method is that we should calculate the coverage by the employer of other costs, and this is very difficult to estimate.

Finally we decided to work with **the national rules of the tax authorities**. As mentioned before, we need the cylinder capacity.
To calculate the cylinder capacity, we did the following. We assumed that a company car is mostly diesel driven. We looked up for each mark, type and diesel engine what the corresponding cylinder capacity is. If we had several cylinder capacities for the type of the mark, we calculated the weighted mean of the cylinder capacity. If there is not diesel version for a type of car, we did the same logic but than for petrol.

Once we had that we could easily find the corresponding fiscal coefficient. As mentioned before we didn't ask in the questionnaire how many km a respondent does for private goals with his company car. We assumed - using the logic of the national rules of tax authorities- that a person does 5000 km a year for private goals.

After we calculated the fiscal benefit of all nature for a whole year, we weighted it for respondents who didn't dispose for a whole year of the company car. **The fiscal benefit of all nature is a gross non-cash employee income**.

Annex 3. Extrapolation for SILC 2004

Step 1. Design factor

Each household in the sample was given as initial weight the inverse of its selection probability. As the sampling scheme is self-weighting in each stratum, this amounts to defining the initial weight as $\frac{total\ of\ private\ households\ in\ stratum}{number\ of\ selected\ households\ in\ stratum}$.

Step 2. Non-response adjustments

Defining *classes* is not that easy

Between

a. geographic location (NUTS2 for us),
b. type of place of residence (urban-mixed-rural classification),
c. various socio-economic characteristics of the areas.,
d. tenure status
e. dwelling type
f. household size (1, 2, 3 and 4+, according to the National Population Register)
g. household type,
h. other characteristics which may be related to the level of household living conditions,

we restricted ourselves to the first two (in order to avoid small classes, whence too heterogeneous weights). In particular, household size, which we used last year, was left out.

Two special cases (households that had been drawn in Brussels = BE21, but had moved and were interviewed, one in Brabant Wallon = BE31, the other in Vlaams Brabant = BE24) had to be dealt with. For simplicity's sake, we decided to extrapolate both at their "new" address (i.e. NUTS2 & urban-mixed-rural classification), with the corresponding non-response weight.

Step 3. Adjustments to external data (level, variables used and sources)

At the individual level, we took 16 dummy calibration variables (2 sexes x 8 essentially decennial[7] age classes).

As far as (private) households were concerned, 4 dummy calibration variables were defined (size= 1, 2, 3 or 4+)[8].

In order to ensure positive weights, exponential calibration was chosen.

In comparison with the previous year, note that

- The (individual) 5-yearly age classes were relaxed, in order to avoid small cells

[7] Except for the lowest (0-15) and the highest (75+).

[8] The totals given by the population register, while the size of (respondents) households was observed by the interviewer; this has the advantages of maintaining consistency between individual and household (R & D) files, as well as consistency between the households results and the population register, but the drawback of calibrating on a (slightly) different variable. .

- Although the information was available for respondents[9], the (household) tenure was dropped, since we lack up-to-date source for calibration totals.

Step 4. Final cross-sectional weights

Result of three operations above.

	N	Minimum	Maximum	Mean (unweighted!)	Std. Dev. (unweighted!)
Weights DB090	5275	135,486	5816,946	841,6442	292,6353

[9] Not from nonrespondents, explaining why "tenure" could not be integrated in Step 2.

PART 2: FIRST RESULTS

♦ Background.

'At the Nice European Council in December 2000, Heads of State and Government reconfirmed and implemented their March 2000 (Lisbon) decision that the fight against poverty and social exclusion would be best achieved by means of the open method of coordination.
Key elements of this approach are the definition of commonly agreed objectives for the European Union (EU) as a whole (eg. The 'social policy agenda'), the development of appropriate national action plans to meet these objectives (eg. 2001-03, 2003-05), and the periodic reporting and monitoring of progress made.
It is in this latter context that the Laeken European Council in December 2001 endorsed best practice criteria for indicator design, and a first set of 18 common statistical indicators for social inclusion, which will allow monitoring in a comparable way of Member States' progress towards the agreed EU objectives. These indicators need to be considered as a consistent whole reflecting a balanced representation of EU social concerns. They cover four important dimensions of social inclusion (financial poverty, employment, health and education), which highlight the "multidimensionality" of the phenomenon of social exclusion. These indicators are often referred to as "the Laeken indicators" ' (EU-SILC 131-rev/04)[10].

Atkinson e.a. (2000) propose a three level classification of indicators for use in the EU monitoring process. From this point of view some of the 'Laeken indicators' are level 1 (lead) –indicators, others are level 2 (complementary to level 1). Level 3 consists of indicators included in the member states' National Action Plans on Social Inclusion (NAPinc). These indicators focus on specificities in particular areas.

♦ Definitions and strategy

For the cross-sectional component of EU-SILC 2004 we calculated a subset of the Laeken indicators, equivalised disposable income and the gender pay gap.

In addition to these indicators Belgium already calculated several other indicators measuring non-monetary dimensions of poverty and social inclusion in particular. Several of these indicators are included in the Belgian 'National Action Plan on Social Inclusion' (NAPincl).

Table 1: Indicators calculated for the current cross-sectional component of EU-SILC.

Primary indicators
At-risk-of-poverty rate (after social transfers)
Inequality of income distribution S80/S20 income quintile share ratio
Relative median at-risk-of-poverty gap, by age and gender
Secondary indicators

[10] EUROPEAN COMMISSION EUROSTAT, *Common Cross-sectional EU indicators based on EU-SILC; the gender pay gap*, Eurostat, EU-SILC 131-rev/04

Dispersion around the at-risk-of-poverty threshold
At-risk-of-poverty rate before social transfers by age and gender
Inequality of income distribution: Gini coefficient
Other indicators
Equivalised disposable income
The gender pay gap
Non-monetary indicators*
Ability to make ends meet
Indicators related to the dwelling: quality, lack of comfort, space
Capacity to face unexpected financial expenses
Capacity to afford a meal with meat, chicken ....
Capacity to afford an annual holiday
Health related indicators
Possession of durables
...

*The majority of the non-monetary indicators are included in the NAPincl.

In **annex 1** we give extensive information on both calculation and interpretation of the indicators. We also explain the breakdowns we used. We disaggregated several of the indicators we calculated by the so-called 'Laeken-breakdowns'; gender, age, most frequent activity status, household type, accommodation tenure status and work intensity.

Combining monetary and non-monetary indicators of poverty has proven a particular successful strategy to identify particularly deprived individuals and households (Atkinson, e.a. 2002)[11].
We adopted this strategy and cross-classified several non-monetary indicators with income and indicators of financial poverty.
These cross-tabulations also serve an important other purpose. They are an elementary check of the (internal) validity of the data as they allow identification of contradictory outcomes on related monetary and non-monetary indicators

Before presenting the results of the indicators we start our outline of the results below with a short look at some relevant features of the survey itself and the distributions of some key-demographic and economic variables.

[11] ATKINSON T., CANTILLON B., MARLIER E., AND NOLAN B., *Social Indicators: the EU and Social Inclusion*, Oxford University Press, Oxford, 2002, p. 240

♦ **Key characteristics: achieved sample size, response rate and distributions on principle demographic and economic variables.**

In **table 2** we list a number of important figures characterizing the sample for both households and individuals.

Table 2 : survey characteristics and key demographic and economic variables

Households	
Sample characteristics	
In sample [12]	10296
Achieved	5275
Response rate	48,6 %
Household type	
1 person	27,8 %
2 adults, both <65 years	18,2 %
2 adults, at least one 65+ years	12,2 %
Other no dependent children	6,9 %
Single parent	6,1 %
2 adults, 1 dependent child	8,6 %
2 adults, 2 dependent children	10,6 %
2 adults, 3+ dependent children	5,6 %
Other with dependent children	3,9 %
Other	0.2 %
Individuals (16+)	
Sample characteristics	
In sample	10351
Achieved	10156
Response rate	98.1 %
Sex	
Males	49,6 %
Females	50,4 %
Age	
0 - 14	21,3 %
15 - 64	64,9 %
65+	13,8 %

[12] Number of eligible households at contacted addresses.

Table 2 continued

Education (highest ISCED level attained)	
Pre-primary education	6,7 %
Primary education	14,2 %
Lower secondary education	16,9 %
(upper) secondary education	32,3 %
Post-secondary non tertiary education	2,7 %
First stage of tertiary education	26,5 %
Second stage of tertiary education	0,7 %
Self defined current economic status	
Full time job	38 %
Part-time job	10,4 %
Unemployed	8,1 %
Pupil, student	8.7 %
In (early) retirement	21,5 %
Permanent disabled	3,1 %
Fulfilling domestic task	8,2 %
Other inactive persons	2,2 %

♦ **Results for the monetary indicators: equivalized disposable income, the Common cross-sectional EU indicators and the unadjusted gender pay gap**

In **annex2, table 1** an overview of the common cross-sectional EU indicators, mean equivalised income and the unadjusted gender pay gap is presented. Also the standard errors for these indicators are reported (annex 2, table 2).

Our results indicate that 14,8% of the population is at risk of poverty. This means they are living in a household where the disposable income (after equivalisation for household size) is below 60% of the national median income at individual level (below 9324 Euro).

Overall women and older persons (65+) seem to be more at risk of poverty than men and persons under the age of 65.
Having a job is an important buffer against poverty. The poverty rate of the working is several times lower than the rate for the inactive.
Persons living on their own and single parents in particular are especially vulnerable to poverty.
Tenants are more at risk than home-owners for poverty, or vice versa, poorer people are more likely to rent their dwellings.

The income quintile share ratio (S80/S20) examines the ratio of the sum of (equivalised disposable) income received by the 20% of the country's population with the highest income (top interquintile interval) to that received by the 20% of the country's population with the lowest income (lowest interquintile interval). Our

results indicate that the top interquintile income interval has 4 times the income of the lowest interquintile interval. By definition this ratio only considers changes in the top and bottom income quintiles.
In the calculation of the Gini-coefficient the complete income distribution is considered. The Gini-coefficient is defined as the relationship of cumulative shares of the population arranged according to the level of equivalised disposable income, to the cumulative share of the equivalised total disposable income received by them. A Gini of 100 % implies complete inequality, a Gini of 0 % perfect income equality within society. The Gini stands at 26,4 % in our data.

The relative median risk of poverty gap is the difference between the median equivalised disposable income of persons below the at-risk of poverty threshold and the at-risk of poverty threshold itself, expressed as a percentage of the at-risk-of-poverty threshold. For our data this indicator equals 22,9 % overall. This means that half of the persons at risk for poverty disposed of an income at of above 77,1 % of the at risk of poverty threshold.

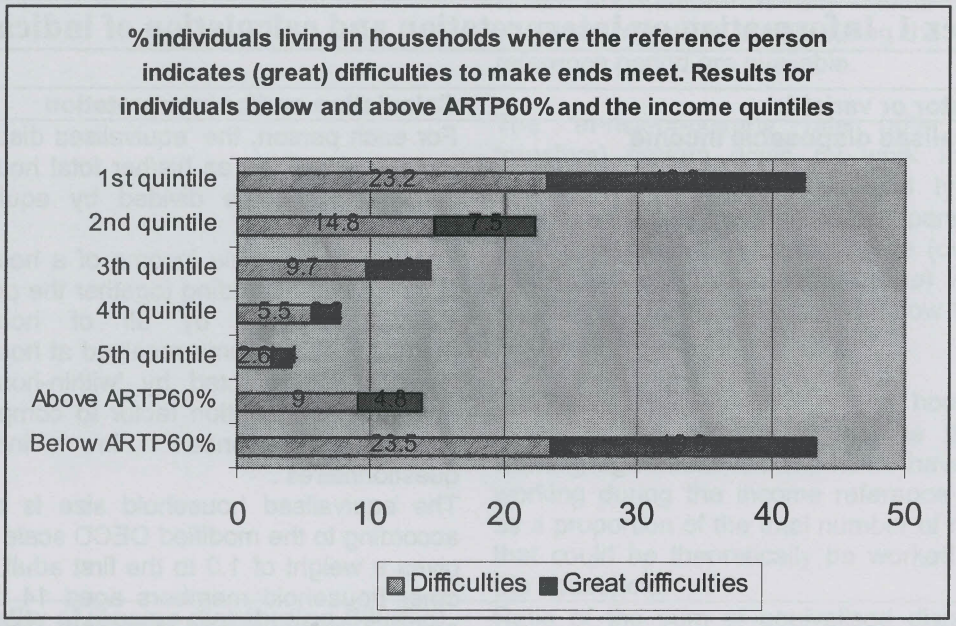
More details about results can be found in the joined 'communiqué de presse/persbericht'.

♦ Results for the non-monetary indicators

In **annex 3** we present the result for the non-monetary indicators and variables. We give for each of these indicators overall results (column 'total') and results cross-tabulated by income (below or above 60% threshold and the income quintiles).

As we already explained combining non-monetary variables and income facilitates identification of particularly poor persons. The concept of 'consistent poverty' is of particularly interest for this matter. 'Consistent poverty' refers to people both falling below a predefined income threshold (the 60% threshold of median income in this case) and reporting an enforced lack of a common set of items (Atkinson, et.al. 2002; p.121). The combination of several of the non-monetary indicators and income in table 4 allow an idea of the level consistent poverty in the survey.

An indication of the level of persons in the survey experiencing extreme poverty (but not necessarily in consistent poverty) can be found in figure 1. The figure shows the result of cross-tabulation of the ability to make ends meet and the position of one's disposable income relative to 60% threshold (ARPT60) and to the total income distribution (the quintiles).
Overall, almost one fifth of the persons in the survey (18,2 %) lives in a household of which the reference persons indicates difficulties to make ends meet. For 7 % (included in the former overall %) the reference person even indicates great difficulties.
43,4 % (23,5% + 19,9%) of the persons below the 60% threshold lives in households experiencing difficulties to make ends meet. They are, by any standard, particularly deprived.
With regard to the validity and quality of the data we find the consistently decreasing number of persons reporting difficulties in the upper quintiles reassuring.


% individuals living in households where the reference person indicates (great) difficulties to make ends meet. Results for individuals below and above ARTP60% and the income quintiles
1st quintile
2nd quintile
3th quintile
4th quintile
5th quintile
Above ARTP60%
Below ARTP60%
23.2
14.8
7.5
9.7
5.5
2.6
9
4.8
23.5
0
10
20
30
40
50
Difficulties
Great difficulties

Annex 1. Information on interpretation and calculation of indicators

Indicator or variable	Calculation and/or interpretation
Equivalised disposable income	For each person, the 'equivalised disposable income is defined as his/her total household disposable income divided by equivalised household size. The total disposable income of a household is calculated by adding together the personal income received by all of household members plus income received at household level, once corrected by 'within-household non-response inflation factor to compensate the non-response in individual questionnaires'. The equivalised household size is defined according to the modified OECD scale (which gives a weight of 1.0 to the first adult, 0.5 to other household members aged 14 or over and 0.3 to household members aged less than 14).
At-risk-of-poverty rate 'ARPR' (after social transfers)	The percentage of persons, over the total population, with an equivalised disposable income below the 'at-risk-of-poverty threshold'. The at-risk-of poverty threshold is set at 60% of the national median equivalised disposable income. The value of at-risk of poverty threshold in national currency will be converted into EURO (if necessary) and into PPS. The conversion of national currency values into Euro and PPS will be done using official exchange rates and PPS published by Eurostat: *New Cronos, Theme 2, Domain 'Price', Collection 'PPP', Table 'PPPSNA95'.*
At-risk-of poverty rate (after social transfers) broken down according to certain variables	The at-risk-of-poverty rate (after social transfers) will be broken down by the following variables: age and gender, most frequent activity status during the income reference period, household type, accommodation tenure status, work intensity The 'at-risk-of poverty rate (after social transfers) broken down by according to these variables is calculated as the percentage of persons in each category with an equivalised disposable income below the 'at-risk-of-poverty threshold' over the total population in the same category (i.e. for each breakdown, the equivalised disposable income of each person is compared with the at-risk-of-poverty threshold calculated for the total population.) The most frequent activity status is the status that individuals declare to have occupied for

continued	more than half the total number of months for which information on any status in the variables of activity status during the income reference period are available. The 'at-risk-of-poverty rate (after social transfers) broken down by work intensity categories and broad household types is calculated as the percentage of persons in work intensity and household type (over the total population in the same group) with an equivalised disposable income below the 'at-risk-of-poverty threshold'. The work intensity (WI) of the household refers to the number of months that all working age household members have been working during the income reference period as a proportion of the total number of months that could be theoretically be worked within the household.
Inequality of income distribution S80/S20 income quintile share ratio	Ratio of the sum of equivalised disposable income received by the 20% of the country's population with the highest equivalised disposable income (top interquintile interval) to that received by the 20% of the country's population with the lowest equivalised disposable income (lowest interquintile interval).
Relative median at-risk-of-poverty gap by age and gender	The difference between the median equivalised disposable income of persons below the at risk of poverty threshold and the at-risk of poverty threshold itself, expressed as a percentage of the **a**t-risk-of-poverty threshold.
Dispersion around the at-risk-of-poverty threshold	The percentage of persons, over the total population, with an equivalised disposable income below 40%, 50% and 70% of the national median equivalised disposable income.
At-risk-of-poverty rate before social transfers except old-age and survivors' benefits	The 'at-risk-of-poverty rate before social transfers except old-age and survivors' benefits' shows the percentage of persons (over the total population) having an equivalised disposable income before social transfers except old-age and survivors' benefits below the national 'at risk-of-poverty threshold'.

At-risk-of-poverty rate before social transfers including old-age and survivors' benefits	The 'at-risk-of-poverty rate before social transfers including old-age and survivors' benefits' shows the percentage of persons (over the total population) having an equivalised disposable income before social transfers except old-age and survivors' benefits below the national 'at risk-of-poverty threshold'.
Inequality of income distribution: Gini coefficient	The Gini coefficient is defined as the relationship of cumulative shares of the population arranged according to the level of equivalised disposable income, to the cumulative share of the equivalised total disposable income received by them.
Gender pay gap in unadjusted form	The 'gender pay gap in unadjusted form' is the difference between men's and women's average gross hourly earnings as a percentage of men's average gross hourly earnings. The gender pay gap is given as the difference between average gross earnings of male paid employees and of female paid employees as a percentage of average gross earnings of male paid employees. The population consists of all paid employees aged 16 – 64 that are 'at work > x hours per week'.
Difficulties to make ends meet	The household respondent's assessment of the level of difficulty experienced by the household in making ends meet. A household may have different source of income and more than one household member may contribute to it. Thinking of the household's total monthly income, the idea is with which level of difficulty the household is able to pay its usual expenses. We calculate the percentage of the individuals in the households that declare to have difficult or very difficult experience to make ends meet.
Non-capacity to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day	Whether, according to the household questionnaire respondent, the household can afford a meal with meat, chicken or fish (or equivalent vegetarian) every second day, if wanted. We calculate the percentage of the reference persons of the households that hasn't got the capacity to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day.

Non-capacity to face unexpected financial expenses	Whether, according to the household respondent, the household can face itself unexpected financial expenses. We calculate the percentage of the reference persons of the households that hasn't got the capacity to face unexpected financial expenses.
Non - capacity to afford paying for one-week annual holiday away from home.	It is about the ability to pay, regardless of whether the household actually want the item. The household has to have the capacity to pay for seven days the accommodation, and this for all the household members. The amount that the household is able to pay is inappropriate to evaluate the capacity of a household to afford paying for one-week annual holiday. We calculate the percentage of the reference persons of the households that hasn't got the capacity to afford paying for one-week annual holiday away from home.
Possession of car, (mobile) telephone, washing machine, television, computer, internet	Whether the household has the item or whether the household does not have the item because it cannot afford it (enforced lack) or for other reasons. 'Enforced lack' implies that the item is something that the household would like to have, but cannot afford. Possession of the item does not necessarily imply ownership: the item may be rented, leased or provided on loan. The household should be considered to possess the item if any member possesses it.
Lack of bath or shower in dwelling	Whether the dwelling has proper room with a bath or a shower. We calculate the percentage of the individuals in the households that doesn't have a proper room with a bath or shower.
Lack of indoor flushing toilet for sole use of household	If the household has an indoor flushing toilet in the dwelling and this for the sole use of household. We calculate the percentage of the individuals in the households that doesn't have a flushing toilet for sole use of household.
Leaking roof, damp walls/floors/foundation, or rot in window frames or floors	Whether, in the judgment of the household respondent, the dwelling has a problem with a leaking roof, dampness in the walls, floors or foundation or rot in window frames and doors. We calculate the percentage of the individuals in the households that declare to have problems with a leaking roof, dampness in the walls, floors or foundation or rot in window frames and doors.

Short of space	A household has short of space if there is less than one room[13] for each member of the household. We calculate the percentage of the individuals in the households that declare to have short of space.
Unable to keep home adequately warm	This question is about ability to pay to keep the home adequately warm, regardless of whether the household actually needs to keep it adequately warm. We calculate the percentage of the individuals in the households that declare to have problems with keeping the home adequately warm.
At least one problem: lack of elementary comfort, short of space, problems with ability to keep warm	Lack of elementary comfort, short of space, problem with ability to keep warm are variables calculated on household level. These variables are recalculated on a individual level.
Lack of elementary comfort	A dwelling with lack of elementary comfort misses a proper room with bath/shower or hot running water, or an indoor flushing toilet for sole use of the household. We calculate the percentage of the individuals in the households that have lack of elementary comfort.
Unmet need for medical examination for financial reason	The aim of this variable is to capture the person's own assessment of whether he or she needed a medical examination but was not able to due to financial reason (could not afford it). We calculate the percentage of the individuals in the households that reported unmet need for medical examination for financial reasons.
Bad or very bad health	It is subjective indicator of the general health of the person (self-perceived health). It is not intended to measure temporary health problems. It is expected to include the different dimensions of health, i.e. physical, social and emotional function and biomedical signs and symptoms. It omits any reference to an age. It is not time limited. We calculate the percentage of individuals that declare to have a bad or very bad health.
Limitation in activities because of health	The person's self-assessment of whether they are hampered in their daily activity by any ongoing physical or mental health problem, illness or disability. Activity limitations are defined as 'the difficulties the individual experience in performing an activity'. Limitations should be due to a health conditions. This is a subjective indicator. We calculate the percentage of individuals who are limited in activities because of health problems.

[13] A room is defined as a space of a housing unit of at least 4 square meters such as normal bedrooms, dining rooms, living rooms and habitable cellars and attics with a high over 2 meters and accessible from inside the unit.

Annex 2. Table 1. Common cross-sectional EU indicators based on the cross-sectional component of EU-SILC and equivalised disposable income.

Mean equivalized income.

16819.65 Euro

Risk – of - poverty threshold.

1 person household	9324,00 Euro
2 adults and 2 dependent children	19580,40 Euro

Risk – of - poverty rate by age and gender.

% below ARPT

	Total	females	males
Total	14,8	15,8	13,8
0-15	17,4	18,1	16,7
0-64	13,7	14,7	12,8
16+	14,2	15,3	13,1
16-64	12,7	13,8	11,7
16-24	15,9	16,8	15,1
25-49	11,7	12,3	11,1
50-64	12,7	14,8	10,7
65+	20,6	21,0	20,2

Risk – of - poverty rate by most frequent activity and gender.

% below ARPT

	total	females	males
Total	14,4	15,6	13,0
At work	4,3	3,6	4,8
unemployed	28,4	27,4	29,4
Retired	17,7	16,6	18,9
Other inactive	26,4	27,0	25,2
total inactive	23,4	23,5	23,2

Risk – of - poverty rate by tenure status.

% below ARPT

Total	14,9
Owner or rent-free	10,7
tenant	26,7

Risk – of- poverty rate by household type.

% below ARPT

total no dependent children	14,4
1 person (total)	20,7
2 adults, both < 65 years	10,6
2 adults, at least one 65+ years	19,7
Other no dependent children	5,3
total dependent children	15,4
single parent, at least 1 dependent child	35,9
2 adults, 1 dependent child	9,7
2 adults, 2 dependent children	9,0
2 adults, 3+ dependent children	18,1
other households dependent children	16,6

Risk – of - poverty rate by household type – single households

% below ARPT

Female	22,8
Male	18,3
< 65	19,2
65+	23,2

Risk – of - poverty rate by work intensity

% below ARPT

Household without dependent children	W=0	30,3
	0<W<1	6,7
	W=1	2,9
Household with dependent children	W=0	70,2
	0<W<0,5	27,6
	0,5<W<1	13,9
	W=1	3,6

Dispersion around at – risk—poverty-threshold

% below ARPT

40% of median	4,7
50% of median	8,9
70% of median	23,4

Risk – of - poverty rate by age and gender before all transfers.

% below ARPT

	Total	females	males
Total	42,0	44,6	39,3
0-15	33,0	32,6	33,3
16+	44,0	47,2	40,7
16-64	32,5	34,8	30,2
65+	91,8	91,2	92,5

Risk – of - poverty rate by age and gender before all transfers (including pensions).

% below ARPT

	Total	females	males
Total	27,5	28,3	26,6
0-15	32,0	31,9	32,1
16+	26,5	27,5	25,3
16-64	26,9	28,1	25,7
65+	24,5	25,4	23,3

Relative median risk-of-poverty gap by age and gender.

% below ARPT

	Total	females	males
Total	22,9	21,7	23,7
0-15	22,1	-	-
16+	22,9	21,2	24,2
16-64	24,3	23,6	25,3
65+	18,2	16,7	19,0

S80/S20 quintile share ratio.	4,0
Gini coefficient.	26,4
Gender Pay Gap	5,87

Annex 2. Table 2: Standard errors for the common cross-sectional EU indicators, equivalised disposable income

Risk – of - poverty threshold.
SE

1 person household	95,9 Euro

Risk – of - poverty rate by age and gender.

SE prop. below ARPT

	Total	females	Males
Total	0,75%	0,84%	0,80%
0-15	1,66%	2,05%	1,95%
0-64	0,84%	0,96%	0,86%
16+	0,68%	0,76%	0,73%
16-64	0,75%	0,87%	0,78%
16-24	1,63%	2,13%	1,93%
25-49	0,85%	0,98%	0,95%
50-64	1,28%	1,56%	1,37%
65+	1,49%	1,48%	1,94%

Risk – of - poverty rate by most frequent activity and gender.
SE prop. below ARPT

	total	females	Males
Total	0,75%	0,84%	0,80%
At work	0,47%	0,58%	0,62%
unemployed	1,12%	1,18%	1,33%
Retired	2,60%	3,58%	3,22%
Other inactive	1,19%	1,45%	1,69%
total inactive	1,56%	1,65%	2,33%

Risk – of - poverty rate by tenure status.
SE prop. below ARPT

Total	0,75%
Owner or rent-free	0,78%
tenant	1,93%

Risk – of- poverty rate by household type.
SE prop below ARPT

total no dependent children	0,85%
1 person (total)	1,32%
2 adults, both < 65 years	1,53%
2 adults, at least one 65+ years	2,08%
Other no dependent children	1,64%
total dependent children	1,29%
Single parent, at least 1 dependent child	4,77%
2 adults, 1 dependent child	1,83%
2 adults, 2 dependent children	1,73%
2 adults, 3+ dependent children	3,43%
other households dependent children	4,03%

Risk – of - poverty rate by household type – single households
SE prop. below ARPT

Female	1,74%
Male	1,91%
< 65	1,92%
65+	1,74%

Risk – of - poverty rate by work intensity
SE prop. Below ARPT

Household without dependent children	W=0	2,57%
	0<W<1	1,32%
	W=1	0,72%
Household with dependent children	W=0	5,29%
	0<W<0,5	6,14%
	0,5<W<1	2,65%
	W=1	0,91%

Dispersion around at – risk—poverty-threshold

	% below ARPT
40% of median	0,51%
50% of median	0,65%
70% of median	0,79%

Risk – of – poverty rate by age and gender before all transfers.
SE prop. below ARPT

	Total	females	males
Total	0,78%	0,86%	0,89%
0-15	1,82%	2,24%	2,26%
16+	0,72%	0,81%	0,83%
16-64	0,81%	0,94%	0,91%
65+	1,58%	1,58%	2,04%

Risk – of – poverty rate by age and gender before all transfers (including pensions).
SE prop. below ARPT

	Total	females	males
Total	0,78%	0,85%	0,89%
0-15	1,83%	2,25%	2,30%
16+	0,71%	0,79%	0,82%
16-64	0,86%	0,98%	0,97%
65+	0,88%	0,94%	1,20%

S80/S20 quintile share ratio.
0,15

Gini coefficient.
0,52

Gender pay gap.
2,58

Annex 3. Non-monetary indicators

Table 4: Current cross-sectional non-monetary: Percentage of individuals in households with ...

Indicator	Total	Below ARPT	Above ARPT	1th quintile	2nd quintile	3th quintile	4th quintile	5th quintile
difficulties to make ends meet	18,1	43,1	13,8	42,2	22,3	14,4	7,7	4
non- capacity to face unexpected financial expenses	28,5	56,8	23,5	56,3	38,2	26,2	14,3	7,3
can't afford to receive family or friends every month	12	26,5	9,4	26,7	17	8,8	5,5	2,1
can't afford a meal with meat every second day	4,2	11,7	2,9	10,1	5,6	3,1	1,2	1,1
can't afford paying for one week annual holiday	28,7	56,2	23,9	55,7	41,3	26,2	14,2	6
lack of elementary comfort (lack of bad/shower, toilet and/or hot running water)	2,9	6,2	2,3	6,1	4,1	1,9	1,2	1,2
leaking roof, damp walls/floors/foundation, or rot in window frames or floors	13,5	19,9	12,4	18,8	13,7	14,4	11,9	8,9
less than one room per person	5,4	13,1	4,1	11,9	6,7	5,7	2,1	0,7
unable to keep home adequately warm	6,4	10,3	5,7	10	7,9	5,7	5	3,3
unmet need for medical examination for financial reasons	1,8	5	1,2	5	2,6	1,3	0,1	0,2
bad or very bad health	8,7	14	7,8	14,2	12,6	8,4	4,5	4
limitation in activities because of health problems	10,1	15,2	9,2	15,7	13,5	10,4	6	5
No participation in recreational or cultural activities	62,1	76,2	59,7	75,3	70,2	62,6	54,4	48,4