



# QUALITY REPORT FOR STATISTICAL SURVEY Income and Living Conditions Survey (SILC) For 2015

Organisational unit: Living Conditions and Economic Activity of Population Statistics Department

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#### 0. Basic information

Purpose, goal, and subject of the survey

The survey collects data on gross and net income of households and all household members, data on educational status of persons, activity status and employment, health care and childcare, data on financial and material status of households and data on other aspects of living standards of households. The survey is a reference data source for monitoring income, poverty and social exclusion statistics. Survey results: poverty and social exclusion indicators (monetary poverty, material deprivation indicators, distribution of income, housing conditions).

## Reference period

The survey is carried out annually and, therefore, the reference period is a calendar year, i.e. 2015

## Legal acts and other agreements

Official Statistics Act (OG, Nos 103/03, 75/09, 59/12 and 12/13 - consolidated text)

Annual Implementation Plan of Statistical Activities of the Republic of Croatia 2015

Regulation (EC) No 1177/2003 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 concerning EU-SILC as regards definitions and updated definitions Commission regulation (EC) No 1981/2003 of 21 October 2003 implementing Regulation (EC) No 1177/2003 concerning EU-SILC as regards the fieldwork aspects and imputation procedures

Commission regulation (EC) No 1982/2003 of 21 October 2003 implementing Regulation (EC) No 1177/2003 concerning EU-SILC as regards the sampling and tracing rules Commission regulation (EC) No 1983/2003 of 7 November 2003 implementing Regulation (EC) No 1177/2003 concerning 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 concerning EU-SILC as regards the detailed content of intermediate and final quality reports

Commission regulation (EC) No 676/2006 of 2 May 2006 implementing Regulation (EC) No 1177/2003 concerning EU-SILC as regards definitions and updated definitions EU-SILC 065 Description of Target Variables 2015, Eurostat

## Classification system

Decision on the National Classification of Activities, 2007 version (OG, Nos 58/07 and 72/07) National Classification of Occupations, NKZ 10. (OG, No. 147/10) National Classification of Education – NSKO (OG, No. 105/01)

International Standard Classification of Education Degree of Urbanisation (DEGURBA) 2011

Common classification of territorial units for statistics, 2013 version (NUTS)

Alphabetical Code List of States and Countries – Letter Codes of Settlements of the Republic of Croatia, 2015

All mentioned classifications are available on the web site of the Croatian Bureau of Statistics in the KLASUS application:

http://www.dzs.hr/Hrv/important/Nomen/nomenclatures.htm

## Concepts and definitions

#### Basic definitions:

Household is every family or other community of individuals who live together and jointly spend their income in order to meet the basic existential needs (accommodation, food etc.).

Total income of a household is the total net income received by a household and all its members during the defined reference period. Total income includes the income from paid employment, the income from self-employment, the property income, pensions, social transfers and other receipts from persons who are not household members.

Equivalised income is calculated by dividing the total household income by the equivalised household size calculated according to the modified OECD scale, in which the household head is given coefficient 1, every other adult aged 14 and over is given coefficient 0.5, and every child under 14 years of age is given coefficient 0.3. This procedure is applied in order to allot equal share to each member with respect to joint earnings.

#### Basic indicators:

At-risk-of-poverty rate means a percentage of persons with the equivalised disposable income below the at-risk-of-poverty threshold.

The at-risk-of-poverty threshold represents a borderline of the risk of poverty. It is determined by calculating the equivalised income per household member for all households. After that, the middle value (median) of the income distribution is determined and 60% of the median is determined as the risk-of-poverty threshold. It is presented in kuna.

People in risk of poverty or social exclusion is an indicator that represents persons (as percentage of persons in total population) who are at risk of poverty or severely materially deprived or living in a household with very low work intensity.

Material deprivation rate shows the percentage of people living in households cannot afford, exclusively due to lack of financial resources, at least three of nine items of material deprivation.

The quintile share ratio (S80/S20) is an indicator of the income inequality and it measures the ratio in the top and bottom quintiles. It represents the ratio between the total equivalised income of the 20% of population with the highest income and the 20% of population with the lowest income.

Gini coefficient is a measure of income inequality distribution. If there were a perfect equality, that is, if each person received the same income, the Gini coefficient would be 0%. The closer to 100% the value is, the greater the income inequality is.

The relative at-risk-of-poverty gap is a difference between the at-risk-of-poverty threshold and the equivalised income median of persons below the at-risk-of-poverty threshold.

The dispersion around the at-risk-of-poverty threshold indicates a percentage of persons at the risk of poverty in case when the at-risk-of-poverty threshold is set at 40%, 50% and 70% of the median equivalised income.

#### Statistical units

The survey is carried out on the sample of private households. Statistical units are all selected private households and all household members. Household members aged 16 and over (age as on 31 December 2014) are included in a detailed individual interview according to the prescribed methodology.

## Statistical population

The survey is carried out on the sample of private households and, according to the methodology. Institutional households (boarding homes, prisons, hospitals providing permanent accommodation to persons, etc.) are not included.

## 1. Relevance

#### 1.1. Data users

Data obtained in this survey are used for creating social policies, in various scientific analyses and international comparisons and, in general, for informing the broad public on the social development status.

External users - national:

- scientific and research institutes (Institute for Public Finance, the Institute of Economics, etc.)
- ministries and agencies (Ministry of Social Policy, Croatian Employment Service etc.)

External users - international:

scientific and research institutes, UN, ILO, UNICEF

#### 1.1.1 User needs

Scientific and research institutes as well as individual researchers use data for national and international scientific and research projects and papers aimed at developing recommendations for relevant institutions in order to improve the socio-economic status of the population in risk of poverty or social exclusion. Ministries and other policy-makers use survey data for determining necessary improvements in their scope of work, e.g. in the area of social policy.

International users: Eurostat use survey data for systematic and user-oriented review of internationally comparable indicators on income and living conditions of the population (for all EU Member States). UNICEF use indicators of poverty and living conditions of children to focus its activities and aid on the most vulnerable groups of children.

## 1.1.2 User satisfaction

The User Satisfaction Survey was conducted in 2013 on the operation of the Croatian Bureau of Statistics in general, which also included the domain of population income. At the time being, a particular user satisfaction survey on the population income is not conducted.

## 1.2. Completeness

Data collected in this survey are set in the methodology as defined in EU regulations and Eurostat's methodology standards prescribed for the EU-SILC survey (Statistics on Income and Living Conditions). The conduct of that survey, data processing and data releasing are entirely harmonised with the defined methodology, which ensured full comparability of national data with other EU Member States' data.

## 1.2.1Data completeness rate

The contents of the survey, processing method and data accessibility are entirely harmonised with EU regulations and Eurostat's methodological standards. Data ensure full comparability with other EU Member States' data. A part of data is available to users through regular publications of the Croatian Bureau of Statistics. Other data are available on users' request. Data completeness rate is: 100%

# 2. Accuracy and reliability

## 2.1. Sampling error

The sampling error shows the precision of sample-based estimates of population parameters. Sampling errors were calculated applying the linearization method or the Woodruff method (SAS SURVEYFREQ and SURVEYMEANS procedures). The calculation was done by fixing the at-risk-of-poverty threshold.

The following formula was used in the precision calculation:

$$se < sqrt [(p x (1 - p))/X]$$

Where se = standard error; sqrt = square root; p = proportion (of the at-risk-of-poverty rate); X = minimum effective sample size

# 2.1.1 Sampling error indicators

Sampling error indicators:

Table 1. Sampling error indicators for particular indicators

|   | Indicator | Standard | 95% reliabi | ility interval | Coefficient of variation |  |
|---|-----------|----------|-------------|----------------|--------------------------|--|
|   |           | error    | Lower limit | Upper limit    | (%)                      |  |
| At-risk-of-poverty threshold                        |           |          |             |                |                          |  |
| One-person household                                | 24 979    | 305.94   | 24 377      | 25 577         | 1.22                     |  |
| Household consisting of two adults and two children | 52 456    | 642.47   | 51 192      | 53 712         | 1.22                     |  |
| People at risk of poverty and social exclusion      |           |          |             |                |                          |  |
| Total   | 29.1      | 0.89     | 27.3        | 30.8           | 3.06                     |  |
| Men   | 28.4      | 0.95     | 26.6        | 30.3           | 3.35                     |  |
| Women   | 29.6      | 0.94     | 27.8        | 31.5           | 3.18                     |  |
| 0 – 17  | 28.2      | 1.83     | 24.6        | 31.7           | 6.49                     |  |
| 18 – 64   | 28.5      | 0.91     | 26.7        | 30.3           | 3.19                     |  |
| 65+   | 31.8      | 1.14     | 29.6        | 34.1           | 3.58                     |  |
| Adriatic Croatia                                    | 25.0      | 1.42     | 22.2        | 27.8           | 5.68                     |  |
| Continental Croatia                                 | 31.1      | 1.12     | 28.9        | 33.3           | 3.60                     |  |

(continued)

|  | Indicator | Standard | 95% reliabi | lity interval | Coefficient of variation |
|--|-----------|----------|-------------|---------------|--------------------------|
|  |           | error    | Lower limit | Upper limit   | (%)                      |
| At-risk-of-poverty rate                                  |           |          |             |               |                          |
| Total  | 20.0      | 0.77     | 18.5        | 21.5          | 3.85                     |
| Men  | 19.3      | 0.84     | 17.7        | 21.0          | 4.35                     |
| Women  | 20.6      | 0.81     | 19.1        | 22.2          | 3.93                     |
| 0 – 17   | 20.9      | 1.70     | 17.6        | 24.2          | 8.13                     |
| 18 – 64  | 17.9      | 0.74     | 16.4        | 19.3          | 4.13                     |
| 65+  | 26.3      | 1.06     | 24.2        | 28.4          | 4.03                     |
| At-risk-of-poverty rate, by regions                      |           |          |             |               |                          |
| Adriatic Croatia   | 17.4      | 1.28     | 14.9        | 19.9          | 7.36                     |
| Continental Croatia                                      | 21.4      | 0.96     | 19.5        | 23.3          | 4.49                     |
| People severely materially deprived                      |           |          |             |               |                          |
| Total  | 13.7      | 0.69     | 12.4        | 15.1          | 5.04                     |
| Men  | 13.9      | 0.74     | 12.5        | 15.4          | 5.32                     |
| Women  | 13.6      | 0.72     | 12.2        | 15.0          | 5.29                     |
| 0 – 17   | 13.4      | 1.38     | 10.7        | 16.1          | 10.30                    |
| 18 – 64  | 13.6      | 0.72     | 12.2        | 15.0          | 5.29                     |
| 65+  | 14.5      | 0.83     | 12.8        | 16.1          | 5.72                     |
| People living in households with very low work intensity |           |          |             |               |                          |
| Total  | 14.4      | 0.75     | 13.0        | 15.9          | 5.21                     |
| Men  | 14.4      | 0.85     | 12.8        | 16.1          | 5.90                     |
| Women  | 14.4      | 0.81     | 12.8        | 16.0          | 5.63                     |
| 0 – 17   | 12.7      | 1.43     | 9.9         | 15.5          | 11.26                    |
| 18 – 64  | 15.0      | 0.67     | 13.7        | 16.3          | 4.47                     |

## 2.1.2 Bias due to sample selection process

Bias due to sample selection process indicator is not computed since the survey is conducted on the sample of randomly selected units. The sample is representative for the whole population because not a single part of the population is omitted.

# 2.2. Non-sampling error

Non-sampling errors are linked to all errors that are not related to sample selection, such as coverage errors, measurement errors, processing errors and non-response errors. Non-response errors are caused by the non-response of the whole survey unit (household or reference person – unit non-response) and by the non-response to a single item, i.e. question in the questionnaire (item non-response).

## 2.2.1 Coverage error

The sampling frame for a new rotation group for the Income and Living Conditions Survey in 2015 was based on data of the Census of Population, Households and Dwellings in 2011. The eligibility rate for a part of the sample that was included in the Survey for the first time (the part selected in 2015.) was 93.24%.

Table 2. Eligibility rate by statistical regions for a new rotation group

| Statistical region (NUTS 2) | Selected addresses | Valid addresses | Valid address rate (%) |
|-----------------------------|--------------------|-----------------|------------------------|
| Republic of Croatia         | 5 516              | 5 143           | 93.24                  |
| Adriatic Croatia            | 2 296              | 2 141           | 93.25                  |
| Continental Croatia         | 3 220              | 3 002           | 93.23                  |

## 2.2.2 Over-coverage rate

An over-coverage rate represents a share of sample units that do not belong to the target population. In the case of SILC, it represents a share of addresses selected into the sample, for which it was determined after the fieldwork (interviewing) that they did not exist, or that they were not occupied, or that the dwelling existed but it was not intended for permanent dwelling (business premises, cottages, summer houses etc.). It is calculated only for a new rotation group.

The unweighted over-coverage rate is: 6.76%

#### 2.2.3 Measurement errors

Measurement errors are all errors that may occur during the collection or entry of data into questionnaires. Those errors can be minimised by correctly defining of the questionnaire, a detailed training of interviewers, implementing an adequate data collection method as well as by checking of questionnaires during and after the field work. The data collection method implemented in the SILC 2015 was CAPI (Computer-Assisted Personal Interview). This method ensures a standardised interviewing. The questionnaire has been designed in the Blaise application.

Questions have been defined in a way that they contain all information sufficient for an answer. If there is a need for additional explanations regarding questions, the interviewer can at any time offer explanations that can be found under almost every question, or put down additional explanations regarding answers. A methodological unit in charge of the survey conducts a detailed testing of the questionnaire before the beginning of the survey. The questionnaire contains an integrated logical sequence of questions as well as verification of answers (checks of minimal and maximal values, logical connection between particular questions, checks of impossible values, categories of answers that are automatically adjusted to other answers etc.).

The survey questionnaire is very minute. It has been created so to help collect the required variables defined in the methodology in the best possible way. Having in mind that the system of incomes at the national level is quite broad, a single income variable defined in the methodology is referred to in several questions. This is why there are two sets of microdata, a set defined by the EU methodology and a set defined by the survey questionnaire. The questionnaire is divided into two main parts:

- The questionnaire for a household as a whole: it contains information on each selected household and data on a dwelling, relations between household members, demographic data on each household member, housing data, finances, durables, income received by the household as a whole.

- The questionnaire for household members: answered by each household member aged 16 and over (age as on 31 December 2014). It contains information on education, activity and labour status, all income components at individual level, data on health status, child care.

Prior to the data collection (field work), interviewers and controllers attended a two-day training. A total of 93 interviewers and 21 controllers (one controller per county in charge of coordination of work) were involved in the data collection. The training was focused on five main domains: general handling of laptops, general functioning of the questionnaire in the Blaise application, using the application for managing and transmission of data (Case Management System), interviewing skills and detailed methodological explanations related to each individual question in the questionnaire.

The data collection is followed by detailed verification of all responses (such as the checks of minimum and maximum values, verification of all income items, check of impossible values etc.).

## 2.2.4 Non-response errors

The non-response error shows how many statistical units did not fill in the questionnaire.

There are two types of non-response:

- non-response of the entire observation unit (household/referent person selected into the sample)
- non-response to individual questions the selected observation unit is successfully interviewed, but answers regarding individual question/variable are not collected.

## 2.2.5 Unit non-response rate

The unit non-response rate is divided to the non-response rate at household level and the non-response rate at individual level.

The non-response rate at household level is calculated according to the following formula:

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

Where:

Ra – means a number of successfully contacted addresses/a number of valid addresses

Rh – means a number of households successfully interviewed/number of valid households living at contacted addresses.

The non-response rate at individual level is calculated according to the following formula:

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

Where:

Rp — means a number of completed individual interviews/number of valid persons in successfully interviewed households

Table 3. Non-response rate

| addre | Rate of contacted addresses (Ra)* |       | accessfully<br>iewed<br>eholds<br>h)* | Rate of successfully completed individual interviews (Rp)* |       | househ | Non-response rate at<br>household level<br>(NRh)* |      | nse rate at<br>ıal level<br>Rp)* | Total non-response rate at individual level (NRp)* |       |
|-------|-----------------------------------|-------|---------------------------------------|--|-------|--------|---|------|----------------------------------|--|-------|
| A*    | В*                                | A*    | B*                                    | A*   | A* B* |        | B*  | A*   | B*                               | A*   | B*    |
| 91.38 | 86.57                             | 74.74 | 63.86                                 | 99.12  | 99.29 | 31.70  | 44.72   | 0.88 | 0.71                             | 32.30  | 45.11 |

 $A^*$  = Total sample;  $B^*$  = New rotation group selected in the sample in 2015

Table 4. Distribution of contacted households by rotation groups

| Rotation group | Interview accept<br>(DB13 | ted for database<br>15 = 1) |        | 7 rejected* 35 = 2)  %  0,0 66.7 33.3 0,0 |  |
|----------------|---------------------------|-----------------------------|--------|---|--|
|                | Number                    | %                           | Number | %   |  |
| 1              | 1 111                     | 16.9                        | 0      | 0,0                                       |  |
| 2              | 1 112                     | 16.9                        | 2      | 66.7                                      |  |
| 3              | 1 460                     | 22.2                        | 1      | 33.3                                      |  |
| 4              | 2 879                     | 43.9                        | 0      | 0,0                                       |  |
| Total          | 6 562                     | 100.0                       | 3      | 100.0                                     |  |

Table 5. Distribution of households by successfully contacted address

| Rotation<br>group | Total  |       | Address (DB12) | contacted<br>0 = 11) |        | n-contacted<br>1 + 22 + 23) | Address cann<br>(DB120 |       | Address unal<br>(DB120 | ble to access<br>0 = 22) | Address do<br>or in und<br>(DB120 | ccupied |
|-------------------|--------|-------|----------------|----------------------|--------|-----------------------------|------------------------|-------|------------------------|--------------------------|-----------------------------------|---------|
|                   | Number | %     | Number         | %                    | Number | %                           | Number                 | %     | Number                 | %                        | Number                            | %       |
| 1                 | 1 288  | 12.7  | 1 230          | 14.0                 | 58     | 4.4                         | 26                     | 3.2   | 0                      | 0.0                      | 32                                | 6.6     |
| 2                 | 1 383  | 13.7  | 1 298          | 14.8                 | 85     | 6.5                         | 41                     | 5.0   | 1                      | 16.7                     | 43                                | 8.8     |
| 3                 | 1 846  | 18.3  | 1 748          | 19.9                 | 98     | 7.4                         | 61                     | 7.4   | 0                      | 0.0                      | 37                                | 7.6     |
| 4                 | 5 586  | 55.3  | 4 511          | 51.3                 | 1 075  | 81.7                        | 695                    | 84.4  | 5                      | 83.3                     | 375                               | 77.0    |
| Total             | 10 103 | 100.0 | 8 787          | 100.0                | 1 316  | 100.0                       | 823                    | 100.0 | 6                      | 100.0                    | 487                               | 100.0   |

Table 6. Distribution of contacted addresses by outcome per interviewed household

| Rotation<br>group | Total  |       | Interview su<br>comp<br>(DB130 | leted | Intervie<br>comp<br>(DB130<br>22 + 23 | leted<br>= 21 + | Interview<br>(DB130 | •     | Entire ho<br>temporaril<br>duration o<br>(DB130 | y away for<br>f fieldwork | to res | ld unable<br>spond<br>0 = 23) | Other re<br>(DB130 |     |
|-------------------|--------|-------|--------------------------------|-------|---------------------------------------|-----------------|---------------------|-------|---|---------------------------|--------|-------------------------------|--------------------|-----|
|                   | Number | %     | Number                         | %     | Number                                | %               | Number              | %     | Number  | %                         | Number | %                             | Number             | %   |
| 1                 | 1 228  | 14.0  | 1 111                          | 16.9  | 117                                   | 5.3             | 79                  | 4.5   | 18  | 9.0                       | 20     | 7.3                           | 0                  | 0.0 |
| 2                 | 1 297  | 14.8  | 1 114                          | 17.0  | 183                                   | 8.3             | 123                 | 7.1   | 22  | 10.9                      | 38     | 13.9                          | 0                  | 0.0 |
| 3                 | 1 747  | 19.9  | 1 461                          | 22.3  | 286                                   | 12.9            | 220                 | 12.6  | 37  | 18.4                      | 29     | 10.6                          | 0                  | 0.0 |
| 4                 | 4 508  | 51.3  | 2 879                          | 43.9  | 1 629                                 | 73.5            | 1 319               | 75.8  | 124   | 61.7                      | 186    | 68.1                          | 0                  | 0.0 |
| Total             | 8 780  | 100.0 | 6.565                          | 100.0 | 2 215                                 | 100.0           | 1 741               | 100.0 | 201   | 100.0                     | 273    | 100.0                         | 0                  | 0.0 |

# 2.2.6 Item non-response-rate

The unweighted item non-response rate:

Item non-response rate

Item non-response rate is calculated only for aggregated income variables according to the Eurostat's methodology.

Table 7. Item non-response rate

|        | Income variables  Total number of households = 6 562                            | No in  | come  | Inco   | ome   | Full data o | on income<br>ount | Partial or m | -     |
|--------|---|--------|-------|--------|-------|-------------|-------------------|--------------|-------|
|        | Total number of persons = 14 840  | number | %     | number | %     | number      | %                 | number       | %     |
| HY040G | Income from rental of a property or land  | 6 165  | 93.95 | 397    | 7.29  | 199         | 50.13             | 198          | 49.87 |
| HY090G | Interest, dividends, profit from capital investments in unincorporated business | 6 093  | 92.85 | 469    | 8.62  | 339         | 72.28             | 130          | 27.72 |
| HY050G | Family/children related allowances  | 5 750  | 87.63 | 812    | 14.92 | 762         | 93.84             | 50           | 6.16  |
| HY060G | Social exclusion not elsewhere classified                                       | 6 232  | 94.97 | 330    | 6.06  | 308         | 93.33             | 22           | 6.67  |
| HY070G | Housing allowances  | 6 490  | 98.90 | 72     | 1.32  | 66          | 91.67             | 6            | 8.33  |
| HY080G | Regular inter-household cash transfer received                                  | 6 169  | 94.01 | 393    | 7.22  | 265         | 67.43             | 128          | 32.57 |
| HY081G | Alimonies received (compulsory + voluntary)                                     | 6 504  | 99.12 | 58     | 1.07  | 49          | 84.48             | 9            | 15.52 |
| HY100G | Interest repayments on mortgage   | 6 313  | 96.21 | 249    | 4.57  | 249         | 100.00            |              | 0.00  |
| HY110G | Income received by people aged under 16   | 6 192  | 94.36 | 370    | 6.80  | 285         | 77.03             | 85           | 22.97 |
| HY120G | Regular taxes on wealth   | 4 978  | 75.86 | 1 584  | 29.10 | 1 370       | 86.49             | 214          | 13.51 |
| HY130G | Regular inter-household cash transfer paid                                      | 6 230  | 94.94 | 332    | 6.10  | 289         | 87.05             | 43           | 12.95 |
| HY131G | Alimonies paid (compulsory + voluntary)   | 6 504  | 99.12 | 58     | 1.07  | 50          | 86.21             | 8            | 13.79 |
| HY140G | Tax on income and social contributions  | 2 399  | 36.56 | 4 163  | 76.48 | 4 163       | 100.00            |              | 0.00  |
| HY170G | Value of goods produced for own consumption                                     | 3 563  | 54.30 | 2 999  | 55.10 | 2 477       | 82.59             | 522          | 17.41 |
| PY010G | Employee cash or near cash income   | 9 731  | 65.57 | 5 109  | 34.43 | 3 945       | 77.22             | 1 164        | 22.78 |
| PY020G | Non-cash employee income  | 14 212 | 95.77 | 628    | 4.23  | 365         | 58.12             | 263          | 41.88 |
| PY021G | Income from using company car for private purposes                              | 14 764 | 99.49 | 76     | 0.51  | 76          | 100.00            |              | 0.00  |
| PY030G | Employer's social insurance contribution  | 9 720  | 65.50 | 5 120  | 34.50 | 5 120       | 100.00            |              | 0.00  |
| PY031G | Optional employer's social insurance contributions                              | 14 728 | 99.25 | 112    | 0.75  | 112         | 100.00            |              | 0.00  |
| PY035G | Contributions to individual private pension plans                               | 14 628 | 98.57 | 212    | 1.43  | 96          | 45.28             | 116          | 54.72 |
| PY050G | Cash profits or losses from self-<br>employment                                 | 13 142 | 88.56 | 1 698  | 11.44 | 1 042       | 61.37             | 656          | 38.63 |
| PY080G | Pensions received from individual private plans                                 | 14 831 | 99.94 | 9      | 0.06  | 7           | 77.78             | 2            | 22.22 |
| PY090G | Unemployment benefits   | 14 589 | 98.31 | 251    | 1.69  | 219         | 87.25             | 32           | 12.75 |
| PY100G | Old-age benefits  | 11 562 | 77.91 | 3 278  | 22.09 | 3 010       | 91.82             | 268          | 8.18  |
| PY110G | Survivor's benefits   | 13 869 | 93.46 | 971    | 6.54  | 901         | 92.79             | 70           | 7.21  |
| PY120G | Sickness benefits   | 14 733 | 99.28 | 107    | 0.72  | 61          | 57.01             | 46           | 42.99 |
| PY130G | Disability benefits   | 13 468 | 90.75 | 1 372  | 9.25  | 1 281       | 93.37             | 91           | 6.63  |
| PY140G | Education-related allowances  | 14 729 | 99.25 | 111    | 0.75  | 96          | 86.49             | 15           | 13.51 |

## 2.2.7 Processing errors

During the data processing, a detailed verification of all responses is done, such as checks of input values by ranges, checks of possible answers, verification of all income items, verification of data on economic activity and activity and occupation codes, educational status etc. The data processing is done on a microdata set at the questionnaire level and not on a data set defined by the EU methodology.

## 2.2.8 Imputation rate

The imputation is a process applied to supplement uncollected, invalid or inconsistent data that were impossible to edit. Regarding the SILC, all income variables for which a respondent claimed to receive but did not offer an answer to the question on their amount are imputed. All missing or inconsistent values are imputed by using one of the imputation methods, which means that the imputation rate equals the item non-response rate given in Table 7. Item non-response rate.

## 2.2.9 Editing rate

The editing rate is defined for particular key variables as a number of units for which source values have been corrected after data verification in relation to the total number of units. To put it simply, it is a ratio of a number of corrected data (either by repeating CAPI or by logical corrections) to the total number of available data, i.e. data that have been checked. The editing rate is presented at the survey question level and only for variables referring to various types of income.

Table 8. Editing rate for particular variables (unweighted)

|        |   |                | %     |
|--------|---|----------------|-------|
|        | Variable  | Coverage level | Value |
| D106   | Average monthly value of food and drink produced for own consumption                                  | Croatia        | 4.37  |
| D77    | Annual amount for newborn's equipment   | Croatia        | 0     |
| D83    | Income received by people aged under 16   | Croatia        | 4.35  |
| D85    | Regular inter-household cash transfer received  | Croatia        | 0     |
| D85_2  | Alimony received (compulsory + voluntary)   | Croatia        | 0     |
| D89    | Income from rental of property or land  | Croatia        | 0.75  |
| D91_2  | Income from renting business premises, vehicle or equipment   | Croatia        | 1.49  |
| D94    | Income from agriculture (fishery, hunting, forestry)  | Croatia        | 1.02  |
| D95    | Value of produced food and drink on own land consumed on weekly base for the need of household itself | Croatia        | 14.33 |
| I10_A  | Monthly net salary  | Croatia        | 0.07  |
| I14_A  | Net amount of holiday allowance   | Croatia        | 0.12  |
| I14_B_ | Net amount of Christmas allowance   | Croatia        | 0.08  |
| I14_C_ | Net amount of paid overtime   | Croatia        | 2.32  |
| I14_D_ | Net amount of bonus for successful business   | Croatia        | 1.96  |
| I14_E_ | Net amount of 13 <sup>th</sup> salary   | Croatia        | 0     |
| I14_F_ | Net amount of allowances paid for working in remote locations   | Croatia        | 25    |

(continued) %

| Variable  | Coverage level | Value |
|---|----------------|-------|
| 114_G_ Net amount of commissions, tips and gratuities | Croatia        | 0.96  |
| I14_H_ Net amount for public transport                | Croatia        | 1.4   |
| I31 Self-employment income                            | Croatia        | 0.27  |
| lacome from copyrighted contract                      | Croatia        | 0     |
| loome from contract for work                          | Croatia        | 0     |
| Income from immediate benefit                         | Croatia        | 0.53  |
| 147_2 Income from "hands-on" benefit                  | Croatia        | 1.27  |
| Net amount from pension                               | Croatia        | 0.02  |
| I75_B Monthly amount of maternity benefit             | Croatia        | 1.49  |
| 177 Unemployment benefits                             | Croatia        | 0     |
| 179 Disability benefits                               | Croatia        | 0.82  |
| l81 Sickness benefit                                  | Croatia        | 2.8   |
| l90 Amount of severance pay                           | Croatia        | 2.47  |

#### 2.2.10 Hit rate

Hit rate of data verification is a ratio of corrected data to the total number of incorrect data records in the data verification. In 2015, it is: 29%

## 2.2.11 Model assumption error

This indicator is not computed for SILC. All implemented data weighting models and imputation models for the missing data are accurate and harmonised with the Eurostat's recommendations and, therefore, there is no occurrence of any assumption error of a model used in the statistical processing.

## 2.3. Data revision

## 2.3.1 Data revision - policy

In the Calendar of Statistical Data Issues in 2016 it is determined for the SILC data for 2015 to be released as provisional data and final data. Provisional data are issued after all phases of processing but Eurostat's final checks and verification. Final data are issued after Eurostat's final checks and verification. In final checks and before the verification there is a possibility for certain changes in data to occur, which have only a minimum impact on the outcome.

## 2.3.2 Data revision – practice

If there is a need to correct some of the already published data (except previous data), a correction is published along with a notice about the correction.

## 2.3.3 Data revision – average size

It is not recommended for this quality indicator to be computed for annual surveys.

## 2.4. Seasonal adjustment

This indicator cannot be applied in SILC.

# 3. Timeliness and Punctuality

#### 3.1. Timeliness

#### 3.1.1 Time lag – first results

According to the Calendar of Statistical Data Issues for 2016, provisional SILC 2015 data are to be issued six months after the reference period, i.e. on 30 June 2016 (T + 6).

## 3.1.2 Time lag – final results

According to the Calendar of Statistical Data Issues for 2016, final SILC 2015 data are to be issued 10 months after the reference period, i.e. on 20 October 2016 (T + 10).

# 3.2. Punctuality

# 3.2.1 Punctuality – delivery and publication (DBQI: TP3 (Indicator))

Punctuality is a period between the actual date of data issue and targeted date of data issue according to the Calendar of Statistical Data Issues for 2016. Concerning SILC 2015, all publications were issued according to the defined deadlines, so delivery and publication is 100%.

## 4. Accessibility and clarity

Survey results are available in electronic and paper form as well as on the web site of the Croatian Bureau of Statistics: www.dzs.hr

All additional information regarding the results and the survey can be found at e-mail: stat.info@dzs.hr

#### 4.1. News release

Indicators of Poverty and Social Exclusion, 2015 - Final Data

Indicators of Poverty and Social Exclusion, 2015 - First Results

Income and Living Conditions Survey Results, 2015

## 4.2. Other publications

The SILC results are issued in the publications of the Croatian Bureau of Statistics: Statistical Yearbook, Statistical Information, Women and Men in Croatia, Croatia in Figures, Statistics in Line.

## 4.3. On-line database

The results of the 2015 SILC results are currently available in the form of online databases only on the Eurostat website

http://ec.europa.eu/eurostat/web/income-and-living-conditions/data

#### 4.4. Micro-data access

Access to micro-data is regulated by provisions of the Ordinance on the Conditions and Terms of Using Confidential Data for Scientific Purposes (OG, No. 137/13). Micro-data are available at the level of variables defined in the EU methodology and not at the level of the questionnaire.

## 4.5. Documentation on methodology

Notes on methodology are published in First Release and in the publication entitled the Income and Living Conditions Survey Results, while other methodological documents on the survey are available on the Eurostat's web site:

http://epp.eurostat.ec.europa.eu/portal/page/portal/income\_social\_inclusion\_living\_conditions/methodology.

The detailed description of the methodology applied can be found in Quality Reports issued on the web site of the Croatian Bureau of Statistics related to quality.

# 5. Comparability

## 5.1. Asymmetry for mirror flows statistics

This indicator is not applicable to the 2015 SILC Survey.

## 5.2. Comparability over time

The comparability over time, as one of the basic dimensions of the quality, is related to the need for obtained data and information to be comparable over time. The 2015 SILC data are not fully comparable to data from previous years due to the fact that particular income components were classified in more detail in the questionnaire for 2015.

Table 9. Comparison of individual statistics for income variables at household level, 2012-2015

Table 9. Comparison of individual statistics for income variables at household level, 2012 – 2015

| SILC                                |                | 2012                   |           |                | 2013                   |           |                | 2014                   |           |                | 20151)                 |           |
|-------------------------------------|----------------|------------------------|-----------|----------------|------------------------|-----------|----------------|------------------------|-----------|----------------|------------------------|-----------|
| Income variables at household level | Sum of weights | Number of observations | Median    | Sum of weights | Number of observations | Median    | Sum of weights | Number of observations | Median    | Sum of weights | Number of observations | Median    |
| HY010                               | 1 511 298      | 5 818                  | 79 137.89 | 1 513 881.73   | 5 341                  | 76 000.00 | 1 514 264      | 5 423                  | 77 186.83 | 1 488 466.05   | 6 521                  | 84 265,44 |
| HY020                               | 1 512318       | 5 822                  | 67 440.00 | 1 514 509.56   | 5 344                  | 66 014.00 | 1 514 442      | 5 424                  | 66 100.00 | 1 489 264.08   | 6 525                  | 71 600,00 |
| HY022                               | 1 443 386      | 5 529                  | 61 100.00 | 1 450 502.82   | 5 077                  | 60 000.00 | 1 450 553      | 5 162                  | 60 100.00 | 1 425 310.26   | 6 182                  | 65 320.00 |
| HY023                               | 1 184 444      | 4 250                  | 58 738.00 | 1 189 994.93   | 3 869                  | 57 160.00 | 1 195 042      | 4 006                  | 58 320.00 | 1 167 051.17   | 4 833                  | 63 660.00 |
| HY030G                              | 1 496 612      | 5 795                  | 1 600.00  | 1 485 776.00   | 5 297                  | 1 500.00  | 1 486 211      | 5 356                  | 1 500.00  | 1 464 568.65   | 6 467                  | 1 500.00  |
| HY040G                              | 58 265         | 234                    | 15 382.00 | 58 570.56      | 226                    | 16 500.00 | 73 064         | 287                    | 15 600.00 | 79 095.96      | 397                    | 14 600.00 |
| HY050G                              | 243 443        | 761                    | 7 188.00  | 239 619.54     | 634                    | 6 000.00  | 245 956        | 651                    | 6 652.00  | 229 636.88     | 812                    | 7 184.00  |
| HY060G                              | 47 742         | 177                    | 7 200.00  | 54 684.44      | 193                    | 7 200.00  | 4 5176         | 160                    | 7 200.00  | 73 176.59      | 330                    | 8 400.00  |
| HY080G                              | 92 278         | 375                    | 9 000.00  | 119 258.46     | 403                    | 7 000.00  | 120 013        | 410                    | 8 000.00  | 91 674.72      | 393                    | 10 000.00 |
| HY090G                              | 110 856        | 412                    | 1 800.00  | 101 285.17     | 339                    | 1 500.00  | 81 516         | 291                    | 1 500.00  | 101 838.28     | 469                    | 1 000.00  |
| HY100G                              | 33 683         | 108                    | 12 937.25 | 31 459.47      | 86                     | 13 204.52 | 48 696         | 146                    | 12 019.70 | 63 155.19      | 249                    | 1 103.13  |
| HY110G                              | 75 819         | 212                    | 1 000.00  | 124 867.86     | 280                    | 1 000.00  | 120 783        | 305                    | 850.00    | 104 451.73     | 370                    | 800.00    |
| HY120G                              | 458 576        | 1 579                  | 366.00    | 383 766.07     | 1 205                  | 350.00    | 388 363        | 1 234                  | 350.00    | 388 676.91     | 1 584                  | 400.00    |
| HY130G                              | 60 729         | 226                    | 6 700.00  | 48 050.69      | 184                    | 8 400.00  | 65 548         | 233                    | 6 000.00  | 81 554.93      | 332                    | 5 000.00  |
| HY140G                              | 1 031 202      | 3 574                  | 20 141.66 | 1 029 555.30   | 3 222                  | 19 229.50 | 1 039 093      | 3 360                  | 19 620.22 | 1 033 562.11   | 4 163                  | 21 726.43 |
| HY170G                              | 58 0591        | 2 427                  | 3 120.00  | 542 081.50     | 2 121                  | 3 012.00  | 589 074        | 2 260                  | 2 400.00  | 642 877.98     | 2 999                  | 2 400.00  |

<sup>1)</sup> The 2015 SILC data are not fully comparable to data from previous years due to the fact that particular income components were classified in more detail in the questionnaire for 2015.

Table 10. Comparison of individual statistics for income variables at individual level, 2012 – 2015

| SILC                                |                | 2012                   |           |                | 2013                   |           |                | 2014                   |           |                   | 2015 <sup>1)</sup>     |           |
|-------------------------------------|----------------|------------------------|-----------|----------------|------------------------|-----------|----------------|------------------------|-----------|-------------------|------------------------|-----------|
| Income variables at household level | Sum of weights | Number of observations | Median    | Sum of weights | Number of observations | Median    | Sum of weights | Number of observations | Median    | Sum of<br>weights | Number of observations | Median    |
| PY010G                              | 1 303 283      | 4 145                  | 61 324.95 | 1 340 757.56   | 3 921                  | 58 700.34 | 1 391 890      | 4 148                  | 57 000.00 | 1 372 965.44      | 5 109                  | 62 226.01 |
| PY020G                              | 1 059 92       | 339                    | 6 750.00  | 109 005.07     | 295                    | 4 000.00  | 98 541         | 273                    | 6 875.00  | 169 020.24        | 628                    | 4 500.00  |
| PY030G                              | 1 303 283      | 4 145                  | 23 760.31 | 1 340 757.56   | 3 921                  | 21 457.57 | 1 331 890      | 4 148                  | 21 120.00 | 1 376 002.34      | 5 120                  | 25 186.09 |
| PY035G                              | 42 994         | 119                    | 2 650.00  | 43 128.59      | 111                    | 2 086.00  | 33 410         | 104                    | 2 400.00  | 64 367.07         | 212                    | 1 810.00  |
| PY050G                              | 435 813        | 1 624                  | 14 666.67 | 399 744.07     | 1 262                  | 14 893.62 | 418 791        | 1 391                  | 15 333.33 | 413 422.29        | 1 698                  | 12 973.75 |
| PY090G                              | 90 374         | 341                    | 8 400.00  | 85 828.29      | 267                    | 7 200.00  | 87 601         | 291                    | 7 200.00  | 60 567.74         | 251                    | 6 000.00  |
| PY100G                              | 657 040        | 2 960                  | 29 040.00 | 647 949.78     | 2 728                  | 30 000.00 | 642 455        | 2 755                  | 30 000.00 | 658 558.16        | 3 278                  | 30 000.00 |
| PY110G                              | 215 243        | 987                    | 21 600.00 | 211 231.78     | 913                    | 22 200.00 | 203 229        | 858                    | 22 200.00 | 202 691.10        | 971                    | 22 800.00 |
| PY130G                              | 307 954        | 1 283                  | 23 640.00 | 301 110.75     | 1 183                  | 23 760.00 | 300 149        | 1 204                  | 24 000.00 | 290 267.19        | 1 372                  | 24 000.00 |
| PY200G                              | 1 299 130      | 4 133                  | 5 400.00  | 1 332 565.48   | 3 903                  | 5 144.34  | 1 386 600      | 4 133                  | 5 150.00  | 1 365 560.08      | 5 085                  | 5 371.16  |

<sup>1)</sup> The 2015 SILC data are not fully comparable to data from previous years due to the fact that particular income components were classified in more detail in the questionnaire for 2015.

#### 5.2.1 Length of comparable time series

Length of comparable time series means the number of reporting periods within a time series since the last break, i.e., since the introduction of the survey into the statistical system. The Income and Living Conditions Survey was introduced into the statistical system of the Republic of Croatia in 2010, as a regular annual survey. The comparable five-year data series for the period from 2010 to 2014 is available to users. The 2015 SILC data are not fully comparable to data from previous years due to the fact that particular income components were classified in more detail in the questionnaire for 2015.

#### 5.2.2 Reasons for break in time series

The 2015 SILC data are not fully comparable to data from previous years due to the fact that particular income components were classified in more detail in the questionnaire for 2015 (for example, questions about payments for fostering children, questions about payments based on carer parent status).

## 6. Coherence

#### 6.1. Coherence - short-term and structural data

Indicator for this survey is not computed.

#### 6.2. Coherence – national accounts

Indicator for this survey is not computed.

#### 6.3. Coherence – administrative sources

Indicator for this survey is not computed.

## 7. Cost and burden

## 7.1. Cost

The fieldwork costs for the Income and Living Conditions Survey 2015 amounted to 1 181 480 kuna and included costs of interviewers with regard to the collection of SILC 2015 survey data (a part of the interviewers are CBS employees in branch office units, while others are external interviewers employed on contractual basis). Those costs included also the transportation costs for interviewers attending trainings.

## 7.2. Burden

The burden on respondents implies the amount of time spent in responding to the survey questionnaire. An important factor affecting the burden on respondents is the number of questions in the questionnaire. The SILC survey has approximately 375 questions. Although each respondent does not answer every single question, the participation in the survey is a significant burden on respondents due to the built-in automatic jumps in the input data software. The average interview duration per household was 125 minutes, and in the following period it is necessary to make efforts to reduce the burden on respondents (use of administrative data sources, etc.).