



REPUBLIC OF CROATIA



CROATIAN BUREAU OF STATISTICS

**QUALITY REPORT FOR STATISTICAL SURVEY**  
**The Statistics on Income and Living Conditions (SILC)**  
**for 2019**

Organisation 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 education 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 source of data for monitoring income, poverty and social exclusion statistics.

Survey results consist of poverty and social exclusion indicators (monetary poverty, indicators of material deprivation, income distribution, living conditions).

- Reference period

Calendar year

- 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 2018

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 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 concerning Community statistics on income and living conditions (EU-SILC) as regards the fieldwork aspects and imputations procedures

Commission Regulation (EC) No 1982/2003 of 21 October 2003 implementing Regulation (EC) No 1177/2003 concerning Community statistics on income and living conditions (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 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 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 676/2006 of 2 May 2006 implementing Regulation (EC) No 1177/2003 concerning

Community statistics on income and living conditions (EU-SILC) as regards definitions and updated definitions

EU-SILC 065 Description of target variables for 2018, EUROSTAT

International Standard Classification of Education, ISCED 2011, UNESCO, 2012, ISBN 978-92-9189-123-8

- Classification system

National Classification of Activities, 2007 version – NKD 2007. (OG, Nos 58/07 and 72/07)

National Classification of Occupations, 2010 version – NKZ 10. (OG, No. 147/10)

National Standard Classification of Education – NSKO (OG, No. 105/01)

International Standard Classification of Education (ISCED 2011)  
Degree of Urbanisation (DEGURBA) 2011  
Classification of spatial units for statistics (NUTS), 2013 version  
Alphabetical list of countries and their codes – letter codes  
Settlements of the Republic of Croatia, 2019

All listed classifications are published on the website of the Croatian Bureau of Statistics in the application KLASUS <http://www.dzs.hr/Hrv/important/Nomen/nomenclatures.htm>

- Concepts and definitions

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

Equivalised income is calculated in a way that the total household income is divided by 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.

Key indicators:

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

The at-risk-of-poverty threshold represents the limit of poverty risk. 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, while 60% of the median is determined as the risk-of-poverty threshold. The at-risk-of-poverty threshold is presented in kuna.

The material deprivation rate presents the percentage of persons who live in households that cannot afford, exclusively due to lack of financial resources, at least three of nine deprivation items.

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 the 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 equivalised income medians.

- **Statistical units**

The survey is conducted on a sample of private households. Survey units are all selected private households and all household members. A detailed personal interview is conducted with household members aged 16 and over (situation as on 31 December 2018) according to the given methodology.

- **Statistical population**

The survey is conducted on a sample of private households. Private household is any family or other community of people who live together and jointly spend their income in order to meet the basic existential needs (accommodation, food, etc.).

According to the methodology, institutional households (homes, prisons, hospitals for permanent accommodation of persons and similar) are not included in the survey.

## **1. Relevance**

### **1.1. Data users**

Data obtained by EU-SILC survey are used in the area of social policy creation, in various scientific analysis and international comparisons, and, in general, to inform the overall public about the state of social progress.

National users: scientific and research institutes (the Institute of Public Finance, the Institute of Economics, etc.), ministries and institutions (the Ministry of Demography, Family, Youth and Social Policy, the Croatian Employment Service, etc.).

International users: scientific and research institutes, the World Bank, UN, ILO, UNICEF.

#### **1.1.1. User needs**

Scientific and research institutes and independent researchers use survey results for national and international scientific and research projects and works in order to develop recommendations to relevant institutions aimed at improving the socio-economic status of the population at risk of poverty or social exclusion. The Ministry of Demography, Family, Youth and Social Policy and the Croatian Employment Service use survey results to determine the necessary improvements in their field of work, for example, in the area of social policy.

International users: Eurostat use survey data for a systematic and user-oriented presentation 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 in regard to children in order to direct their activities and their help to the most vulnerable groups of children.

#### **1.1.2. User satisfaction**

The Customer Satisfaction Survey was conducted in 2013 and again in 2015 on the operation of the Croatian Bureau of Statistics in general. The Customer Satisfaction Survey generally covers the area of income of the population statistics as well. There is currently no a separate customer satisfaction survey that covers only the income and living conditions statistics area.

## 1.2. Completeness

Data collected through the EU-SILC survey are determined by the survey methodology defined by EU regulations and Eurostat methodological standards related to the EU-SILC (Statistics on Income and Living Conditions) survey. The implementation of this survey, data processing and publication of the results are fully aligned with the defined methodology, thus ensuring a complete comparability of national results with the results of other EU Member States.

### 1.2.1. Data completeness rate

Data completeness rate is: 100%

## 2. Accuracy and reliability

### 2.1. Sampling error

The sampling error shows the precision of estimates of sample-based population parameters. The sampling error has been calculated applying the linearisation technique or the Woodruff method (SAS SURVEYFREQ and SURVEYMEANS procedures). The calculation has been done with the fixed poverty limit.

The following formula is applied in the calculation of accuracy:

$$se < \sqrt{(p \times (1-p))/X},$$

where: se = standard error

sqrt = root

p = proportion (risk of poverty rate)

X = minimum effective sample size

### 2.1.1. Sampling error indicators

Table 1. Sample error indicators for particular indicators, the Income and Living Conditions survey, 2019

| Indicator   | Value         | Standard error | 95% confidence interval |             | Variation coefficient (%) |
|---|---------------|----------------|-------------------------|-------------|---------------------------|
|   |               |                | Lower limit             | Upper limit |                           |
| <b>At-risk-of-poverty threshold</b>                             |               |                |                         |             |                           |
| One-person household  | <b>32 520</b> | 322.37         | 31 888                  | 33 152      | 0.99                      |
| Household consisting of two adults and two children             | <b>68 292</b> | 676.98         | 66 965                  | 69 619      | 0.99                      |
| <b>People at risk of poverty or social exclusion</b>            |               |                |                         |             |                           |
| Total   | <b>23.3</b>   | 0.67           | 22.0                    | 24.6        | 2.88                      |
| Men   | <b>22.1</b>   | 0.73           | 20.7                    | 23.6        | 3.30                      |
| Women   | <b>24.3</b>   | 0.71           | 23.0                    | 25.7        | 2.92                      |
| 0 – 17 years  | <b>20.7</b>   | 1.29           | 18.1                    | 23.2        | 6.23                      |
| 18 – 64 years   | <b>20.7</b>   | 0.78           | 19.3                    | 22.1        | 3.76                      |
| 65 years or over  | <b>33.6</b>   | 0.90           | 31.8                    | 35.4        | 2.68                      |
| Adriatic Croatia  | <b>22.0</b>   | 1.17           | 19.7                    | 24.3        | 5.32                      |
| Continental Croatia   | <b>24.0</b>   | 0.82           | 22.3                    | 25.5        | 3.42                      |
| <b>At-risk-of-poverty rate</b>                                  |               |                |                         |             |                           |
| Total   | <b>18.3</b>   | 0.60           | 17.1                    | 19.5        | 3.28                      |
| Men   | <b>17.2</b>   | 0.66           | 15.9                    | 18.5        | 3.84                      |
| Women   | <b>19.3</b>   | 0.63           | 18.1                    | 20.5        | 3.26                      |
| 0 – 17 years  | <b>17.1</b>   | 1.19           | 14.8                    | 19.5        | 6.96                      |
| 18 – 64 years   | <b>14.8</b>   | 0.61           | 13.6                    | 16.0        | 4.12                      |
| 65 years or over  | <b>30.1</b>   | 0.86           | 28.4                    | 31.7        | 2.86                      |
| <b>At-risk-of-poverty rate, by regions</b>                      |               |                |                         |             |                           |
| Adriatic Croatia  | <b>16.1</b>   | 0.96           | 14.2                    | 17.9        | 5.96                      |
| Continental Croatia   | <b>19.4</b>   | 0.76           | 17.9                    | 20.9        | 3.91                      |
| <b>People severely materially deprived</b>                      |               |                |                         |             |                           |
| Total   | <b>7.2</b>    | 0.41           | 6.4                     | 8.0         | 5.69                      |
| Men   | <b>7.1</b>    | 0.45           | 6.3                     | 8.0         | 6.34                      |
| Women   | <b>7.4</b>    | 0.44           | 6.5                     | 8.2         | 5.95                      |
| 0 – 17 years  | <b>5.7</b>    | 0.68           | 4.3                     | 7.0         | 11.79                     |
| 18 – 64 years   | <b>6.8</b>    | 0.47           | 5.9                     | 7.7         | 6.91                      |
| 65 years or over  | <b>10.0</b>   | 0.55           | 8.9                     | 11.1        | 5.50                      |
| <b>People living in households with very low work intensity</b> |               |                |                         |             |                           |
| Total   | <b>9.2</b>    | 0.50           | 8.2                     | 10.1        | 5.43                      |
| Men   | <b>9.6</b>    | 0.57           | 8.5                     | 10.7        | 6.01                      |
| Women   | <b>8.7</b>    | 0.52           | 7.7                     | 9.7         | 5.98                      |
| 0 – 17 years  | <b>6.9</b>    | 0.80           | 5.3                     | 8.4         | 11.59                     |
| 18 – 59 years   | <b>9.9</b>    | 0.48           | 8.9                     | 10.8        | 4.85                      |

### 2.1.2. Bias due to sample selection process

Indicator for this survey is not applicable.

## 2.2. Non-sampling error

Non-sampling errors include all other errors, which are not related to a sample selection, such as coverage errors, measurement errors, processing errors and non-response errors. Non-response errors result from the non-response of the entire survey unit (household or referent person – unit non-response) and the non-response to a particular variable, ie. question in the questionnaire (item non-response).

### 2.2.1. Coverage error

The sample frame for a new rotation group for the SILC survey 2019 was based on the Census of Population, Households and Dwellings in the Republic of Croatia in 2011 data. The rate of eligible units (dwellings) for the part of the sample included in the survey for the first time (the part selected in the sample in 2019) is 91.23%.

Table 2. Rate of eligible units by statistical regions for new rotation group

| Statistical region (NUTS 2) | Selected addresses | Eligible addresses | Rate of eligible addresses (%) |
|-----------------------------|--------------------|--------------------|--------------------------------|
| <b>Republic of Croatia</b>  | 5 516              | 5 032              | 91.23                          |
| Adriatic Croatia            | 2 296              | 2 117              | 92.20                          |
| Continental Croatia         | 3 220              | 2 915              | 90.53                          |

### 2.2.2. Over-coverage rate

The over-coverage rate is a share of sample units that are not a part of the target population. Within the Statistics of Income and Living Conditions survey, it is a share of addresses selected in the sample, but for which the field work (interviewing) showed that either they did not exist any more, or that they were generally unoccupied or that the dwelling found at that address was not intended for permanent residence (such as business premises, cottages, summer houses etc.). It is computed only for the new rotation group. Over-coverage rate is 8.77%

### 2.2.3. Measurement errors

Measurement errors are considered all errors that can emerge during the collection or entering data into survey forms. There is a tendency to minimize such errors by correctly defining the survey form – questionnaire, by comprehensive training of interviewers, by applying adequate data collection method and by checking survey data during and after field work.

The data for the Income and Living Conditions Survey 2019 (SILC 2019) were collected by using the CAPI (Computer-Assisted Personal Interview) method. This method ensures the standardised data collection. The survey form was designed in the Blaise programme application. Questions are defined in a way that they contain all information necessary for providing the answer. If the respondent needs additional explanations related to a particular question, most questions are accompanied with additional explanations beneath the questions that can be offered by the interviewer at any time. For each question, the interviewer can enter additional remarks that further explain a particular answer. Prior to the survey, the survey form is tested in detail by the methodological unit in charge of carrying out the survey. An automated logical sequence of questions and logical checks of the answers (the check of minimal and maximal values, logical correlation between particular questions, check of improbable outcomes, categories of answers are automatically adjusted to other answers, etc.) are incorporated into the survey.

A total of 121 interviewers (64 outsourced and 57 in-house ones) were engaged in data collection for the SILC 2019 survey. Most of them had experience in carrying out the survey from previous years. For interviewers who were included in the SILC 2019 data collection for the first time, a one-day training programme was organised, focused on using the application for data management and transmission (CMS – Case Management System), basic operation

of the questionnaire in the Blaise application, interviewing skills as well as notes on methodology and detailed instruction concerning the SILC 2019 questionnaire.

Notes on methodology for interviewers, which contain methodological explanations and detailed instructions related to every question in the questionnaire, were printed before data collection for training purposes and preparation of field work, and they were handed to every interviewer, supervisor and employee/head involved in the SILC survey.

The field work of interviewers were supervised by 38 supervisors, who are expert statisticians located in branch offices of the Croatian Bureau of Statistics. In each of the 20 regional offices, a supervisor provided necessary support to field interviewers and needed methodological explanations in line with the guidelines of the Croatian Bureau of Statistics.

Data checks performed by supervisors include approximately 20 error and inconsistency warnings for which it is extremely important that they are spotted during the field work, in order to request additional explanations from interviewers, i.e., in order to enable the interviewer to check information with respondents. For that purpose, the notes on methodology and detailed instructions concerning warnings or errors were developed. Supervisors attended the one-day training programme and were handed the notes on methodology and explanations concerning checks they were about to perform in the CMS application.

After data collection, a detailed data verification of the survey material is conducted (checks of minimal and maximal values, logical correlation between particular questions, check of improbable outcomes).

#### 2.2.4. Non-response errors

A non-response error is a result of an unsuccessful attempt to get an answer from a selected statistical unit. There two types of non-responses:

- The non-response of the whole observation unit (household/reference person selected in the sample)
- The non-response to a particular question – a selected observation unit was successfully interviewed, but particular questions/variables remained unanswered.

Pursuant to the Eurostat recommendations, the unweighted non-response rate is calculated for households that have been selected in the sample for the first time and in 2019 the household non-response rate (NRh) was 55.17%. In 2019, the personal non-response rate was 55.65%.

#### 2.2.5. Unit non-response rate

The unit non-response rate is broken down to the household non-response rate and the personal non-response rate.

The household non-response rate is calculated by using the following formula:

$$NRh = (1 - (Ra \times Rh)) \times 100,$$

where:

Ra – number of successfully contacted addresses/number of eligible addresses

Rh – number of successfully interviewed households/number of eligible households at contacted addresses.



The personal non-response rate is calculated by using the following formula:

$$Nrp = (1 - (Rp)) \times 100,$$

where:

Rp – number of completed personal interviews/number of eligible persons in successfully interviewed households.

Table 3. Non-response rate

| Rate of contacted addresses (Ra) |       | Rate of successfully interviewed households (Rh) |       | Rate of successfully completed personal interviews (Rp) |       | Household non-response rate (NRh) |       | Personal non-response rate (NRp) |      | Total personal non-response rate (NRp) |       |
|----------------------------------|-------|--|-------|---|-------|-----------------------------------|-------|----------------------------------|------|--|-------|
| A                                | B     | A  | B     | A   | B     | A                                 | B     | A                                | B    | A                                      | B     |
| 90.82                            | 82.18 | 75.44  | 54.55 | 99.04   | 98.93 | 31.49                             | 55.17 | 0.96                             | 1.07 | 32.15                                  | 55.65 |

A = total sample

B = new rotation group selected in 2019 sample.

Table 4. Distribution of contacted households by rotation groups

| Rotation group | Interview has been accepted in database (DB135 = 1) |       | Interview has not been accepted in database (DB135 = 2) |   |
|----------------|---|-------|---|---|
|                | Number  | %     | Number  | % |
| 1              | 1 900   | 24.1  | -   | - |
| 2              | 1 767   | 22.4  | -   | - |
| 3              | 1 959   | 24.9  | -   | - |
| 4              | 2 254   | 28.6  | -   | - |
| Total          | 7 880   | 100.0 | -   | - |

Table 5. Distribution of households by successfully contacted addresses

| Rotation group | Total  |       | Address has been contacted (DB120 = 11) |       | Address has not been contacted (DB120 = 21 + 22 + 23) |       | Address has not been located (DB120 = 21) |       | Address is inaccessible (DB120 = 22) |       | Address does not exist or is unoccupied (DB120 = 23) |       |
|----------------|--------|-------|---|-------|---|-------|---|-------|--------------------------------------|-------|--|-------|
|                | Number | %     | Number                                  | %     | Number  | %     | Number                                    | %     | Number                               | %     | Number   | %     |
| 1              | 2 152  | 17.60 | 2 069                                   | 19.8  | 83  | 4.7   | 45  | 3.9   | 1                                    | 12.5  | 37   | 6.0   |
| 2              | 2 062  | 16.87 | 1 962                                   | 18.8  | 100   | 5.6   | 56  | 4.8   | 1                                    | 12.5  | 43   | 7.0   |
| 3              | 2 409  | 19.70 | 2 283                                   | 21.9  | 126   | 7.1   | 78  | 6.7   | 1                                    | 12.5  | 47   | 7.6   |
| 4              | 5 603  | 45.83 | 4 132                                   | 39.6  | 1 471   | 82.6  | 978                                       | 84.5  | 5                                    | 62.5  | 488  | 79.4  |
| Total          | 12 226 | 100.0 | 10 446                                  | 100.0 | 1 780   | 100.0 | 1 157                                     | 100.0 | 8                                    | 100.0 | 615  | 100.0 |

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

| Rotation group | Total  |       | Interview has been successfully completed (DB130 = 11) |       | Interview has not been completed (DB130 = 21 + 22 + 23 + 24) |       | Interview has been declined (DB130 = 21) |       | Whole household has been temporarily absent during fieldwork (DB130 = 22) |       | Household was unable to participate in interview (DB130 = 23) |       | Other reasons for declining (DB130 = 24) |   |
|----------------|--------|-------|--|-------|--|-------|--|-------|---|-------|---|-------|--|---|
|                | Number | %     | Number   | %     | Number   | %     | Number                                   | %     | Number  | %     | Number  | %     | Number                                   | % |
| 1              | 2 070  | 19.8  | 1 900  | 24.1  | 170  | 6.6   | 100                                      | 5.4   | 46  | 19.8  | 24  | 7.4   | -  | - |
| 2              | 1 962  | 18.8  | 1 768  | 22.4  | 194  | 7.6   | 116                                      | 8.3   | 48  | 20.7  | 30  | 9.2   | -  | - |
| 3              | 2 283  | 21.9  | 1 959  | 24.9  | 324  | 12.6  | 244                                      | 12.1  | 46  | 19.8  | 34  | 10.5  | -  | - |
| 4              | 4 132  | 39.6  | 2 254  | 28.6  | 1 878  | 73.2  | 1 549                                    | 74.2  | 92  | 39.7  | 237   | 72.9  | -  | - |
| Total          | 10 447 | 100.0 | 8 881  | 100.0 | 2 566  | 100.0 | 2 009                                    | 100.0 | 232   | 100.0 | 325   | 100.0 | -  | - |

## 2.2.6. Item non-response rate

Item non-response rates are calculated only for aggregated income variables in line with the Eurostat's methodology.

Table 7. Item non-response rates

| Income variables<br>Total number of households = 7 879<br>Total number of persons = 17 120 |  | Does not have income |       | Has income |       | Full information on amount |        | Partial information or no information on amount |       |
|--|--|----------------------|-------|------------|-------|----------------------------|--------|---|-------|
|  |  | Number               | %     | Number     | %     | Number                     | %      | Number  | %     |
| HY010  | Total household gross income   | 13                   | 0.16  | 7 866      | 99.84 | 5 664                      | 72.01  | 2 202   | 27.99 |
| HY020  | Total disposable household income  | 12                   | 0.15  | 7 867      | 99.85 | 3 549                      | 45.11  | 4 318   | 54.89 |
| HY022  | Total disposable household income before social transfers other than old-age and survivor's benefits | 217                  | 2.75  | 7 662      | 97.25 | 5 475                      | 71.46  | 2 187   | 28.54 |
| HY023  | Total disposable household income before social transfers including old-age and survivor's benefits  | 2 213                | 28.09 | 5 666      | 71.91 | 3 728                      | 65.80  | 1 938   | 34.20 |
| HY040G   | Income from rental of a property or land   | 7 387                | 93.76 | 492        | 6.24  | 298                        | 60.57  | 194   | 39.43 |
| HY090G   | Interest, dividends, profit from capital investments in unincorporated business                      | 7 518                | 95.42 | 361        | 4.58  | 291                        | 80.61  | 70  | 19.39 |
| HY050G   | Family/children related allowances   | 7 143                | 90.66 | 736        | 9.34  | 667                        | 90.63  | 69  | 9.38  |
| HY060G   | Social exclusion not elsewhere classified  | 7 588                | 96.31 | 291        | 3.69  | 277                        | 95.19  | 14  | 4.81  |
| HY070G   | Housing allowances   | 7 713                | 97.89 | 166        | 2.11  | 144                        | 86.75  | 22  | 13.25 |
| HY080G   | Regular inter-household cash transfer received   | 7 430                | 94.30 | 449        | 5.70  | 293                        | 65.26  | 156   | 34.74 |
| HY081G   | Alimonies received (compulsory + voluntary)  | 7 797                | 98.96 | 82         | 1.04  | 72                         | 87.80  | 10  | 12.20 |
| HY100G   | Interest repayments on mortgage  | 7 560                | 95.95 | 319        | 4.05  | 319                        | 100.00 | -   | -     |
| HY110G   | Income received by people aged under 16  | 7 452                | 94.58 | 427        | 5.42  | 311                        | 72.83  | 116   | 27.17 |
| HY130G   | Regular inter-household cash transfer paid   | 7 524                | 95.49 | 355        | 4.51  | 331                        | 93.24  | 24  | 6.76  |
| HY131G   | Alimonies paid (compulsory + voluntary)  | 7 813                | 99.16 | 66         | 0.84  | 61                         | 92.42  | 5   | 7.58  |
| HY140G   | Tax on income and social contributions   | 2 921                | 37.07 | 4 958      | 62.93 | 4 958                      | 100.00 | -   | -     |
| HY170G   | Value of goods produced for own consumption  | 4 807                | 61.01 | 3 072      | 38.99 | 2 705                      | 88.05  | 367   | 11.95 |
| PY010G   | Employee's cash or near cash income  | 10 582               | 61.81 | 6 538      | 38.19 | 4 844                      | 74.09  | 1 694   | 25.91 |
| PY020G   | Non-cash employee's income   | 16 457               | 96.13 | 663        | 3.87  | 364                        | 54.90  | 299   | 45.10 |
| PY021G   | Income from using company car for private purposes   | 17 046               | 99.57 | 74         | 0.43  | 74                         | 100.00 | -   | -     |
| PY030G   | Employer's social insurance contribution   | 10 549               | 61.62 | 6 571      | 38.38 | 6 571                      | 100.00 | -   | -     |
| PY031G   | Employer's voluntary contribution  | 17 020               | 99.42 | 100        | 0.58  | 100                        | 100.00 | -   | -     |
| PY035G   | Contributions to individual private pension plans  | 16 948               | 99.00 | 172        | 1.00  | 172                        | 100.00 | -   | -     |
| PY050G   | Income from self-employment  | 15 166               | 88.59 | 1 954      | 11.41 | 1 499                      | 76.51  | 455   | 23.29 |
| PY080G   | Pension from individual private plans  | 17 108               | 99.93 | 12         | 0.07  | 9                          | 75.00  | 3   | 25.00 |
| PY090G   | Unemployment benefits  | 16 971               | 99.13 | 149        | 0.87  | 127                        | 85.23  | 22  | 14.77 |
| PY100G   | Old-age benefits   | 11 954               | 69.82 | 5 166      | 30.18 | 4 769                      | 92.32  | 397   | 7.68  |
| PY110G   | Survivors' benefits  | 16 060               | 93.81 | 1 060      | 6.19  | 1 013                      | 95.57  | 47  | 4.43  |
| PY120G   | Sickness benefits  | 16 994               | 99.26 | 126        | 0.74  | 102                        | 80.95  | 24  | 19.05 |
| PY130G   | Disability benefits  | 16 024               | 93.60 | 1 096      | 6.40  | 1 025                      | 93.52  | 71  | 6.48  |
| PY140G   | Education-related allowances   | 16 940               | 98.95 | 180        | 1.05  | 167                        | 92.78  | 13  | 7.22  |

### 2.2.7. Processing errors

During data processing, detailed logical and accounting check of all responses is done, such as checking of input values according to ranges, checking of possible answers, logical and accounting checks of all income items, logic data checking of economic activity, educational status etc.

These checks are performed on the microdata set at the level of the survey questionnaire.

It is possible for an error to emerge in the microdata base during the final processing and preparation of data for the calculation of indicators.

### 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. In other words, 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. That indicator was not computed for the SILC 2019 due to the fact that data verification is done in multiple phases, which involves multiple executors (in the course of the fieldwork, data verifications was also done by supervisors in branch offices).

### 2.2.10. Hit rate

This indicator is not computed for the SILC 2019 survey.

### 2.2.11. Model assumption error

This indicator is not computed for the SILC survey. 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 2020 it is determined for the SILC data for 2019 to be released as provisional data and final data. Provisional data are issued in the Statistics in Line after all phases of processing but Eurostat's final checks and verification. Final data are issued in the First Release 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.

Also, if there is a need to revise already published data, e.g. in the First Release, a new version of the First Release containing the revised data is published.

#### 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 is not applicable for the SILC survey.

## 3. Timeliness and Punctuality

### 3.1. Timeliness

#### 3.1.1. Timeliness – first results

According to the Calendar of Statistical Data Issues for 2020, first results for the SILC 2019 survey are to be issued six months after the reference period. First results were published on 30 June 2020 (T + 6).

#### 3.1.2. Timeliness – final results

According to the Calendar of Statistical Data Issues for 2020, final results for the SILC 2019 survey were issued on 30 September 2020 (T + 9).

### 3.2. Punctuality

#### 3.2.1. Punctuality – delivery and publication

Punctuality is defined as a period from the actual publishing date and the target publishing date according to the Calendar of Statistical Data Issues 2020. Concerning SILC 2019, all publications were issued according to the deadlines as defined in the Calendar of Statistical Data Issues 2020, so delivery and publication is 100%.

## 4. Accessibility and clarity

Publications presenting the survey results are available in electronic and printed form as well as on the website of the Croatian Bureau of Statistics at [www.dzs.hr](http://www.dzs.hr).

All additional information regarding the results and the survey can be found at e-mail address: [stat.info@dzs.hr](mailto:stat.info@dzs.hr).

### 4.1. News release

Indicators of poverty and social inclusion – preliminary data (Statistics in Line)

Indicators of poverty and social inclusion, 2019 (First Release)

The Statistics on Income and Living Conditions (SILC) Survey Results, 2019 (Statistical Report)

#### **4.2. Other publications**

The Statistics on Income and Living Conditions (SILC) Survey results are published in other publications of the Croatian Bureau of Statistics: Statistical Yearbook, Statistical Information, Women and Men in Croatia, Croatia in Figures

#### **4.3. On-line database**

The results of the SILC 2019 Survey results are currently available in the form of online database only on the Eurostat website

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

#### **4.4. Micro-data access**

Conditions under which certain users can have access to microdata are regulated by the Ordinance on the Conditions and Manner of Use of Statistical Data for Scientific Purposes (OG, No. 137/13). Microdata 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](http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/methodology).

### **5. Comparability**

#### **5.1. Asymmetry for mirror flows statistics**

This indicator is not applicable for the SILC 2019 survey.

#### **5.2. Comparability over time**

Comparability, as one of the basic dimensions of the quality, is related to the need for obtained data and information to be comparable over time.

Table 8. Comparison of individual statistics for income variables at household level, 2016 – 2019

| SILC   | 2016 <sup>1)</sup>                  |                |                        | 2017         |                |                        | 2018         |                |                        | 2019         |                |                        |
|--------|-------------------------------------|----------------|------------------------|--------------|----------------|------------------------|--------------|----------------|------------------------|--------------|----------------|------------------------|
|        | 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 |
| HY010  | 1 485 489.75                        | 7 539          | 85 930.92              | 1 481 583.40 | 7 809          | 90 966.54              | 1 470 507.92 | 8 354          | 100 848.00             | 1 472 398.02 | 7 867          | 109 857.94             |
| HY020  | 1 485 938.68                        | 7 542          | 73 800.00              | 1 482 338.97 | 7 814          | 78 000.00              | 1 470 888.79 | 8 358          | 82 800.00              | 1 472 511.02 | 7 868          | 89 220.00              |
| HY022  | 1 448 356.46                        | 7 304          | 68 784.00              | 1 449 335.94 | 7 599          | 72 912.00              | 1 435 623.98 | 8 119          | 77 900.00              | 1 443 082.60 | 7 662          | 83 800.00              |
| HY023  | 1 149 517.81                        | 5 483          | 67 160.00              | 1 149 110.90 | 5 678          | 72 800.00              | 1 140 194.41 | 6 025          | 78 000.00              | 1 154 861.32 | 5 666          | 83 762.00              |
| HY030G | 1 463 637.44                        | 7 461          | 1 500.00               | 1 461 776.21 | 7 744          | 1 500.00               | 1 453 047.25 | 8 293          | 1 500.00               | 1 446 730.40 | 7 787          | 1 740.00               |
| HY040G | 82 637.25                           | 480            | 13 500.00              | 77 921.86    | 456            | 16 500.00              | 80 774.55    | 511            | 17 000.00              | 83 641.76    | 492            | 21 461.00              |
| HY050G | 211 658.58                          | 911            | 7 200.00               | 191 678.68   | 844            | 7 100.00               | 169 801.81   | 805            | 7 200.00               | 182 889.30   | 736            | 9 960.00               |
| HY060G | 47 365.60                           | 263            | 9 600.00               | 51 172.52    | 294            | 9 600.00               | 51 773.43    | 309            | 9 600.00               | 51 628.12    | 292            | 6 560.00               |
| HY080G | 101 970.99                          | 499            | 9 600.00               | 92 527.01    | 487            | 8 000.00               | 89 134.29    | 509            | 10 000.00              | 81 423.09    | 449            | 10 000.00              |
| HY090G | 106 842.38                          | 538            | 1 164.96               | 92 139.83    | 513            | 1 152.07               | 90 825.08    | 499            | 1 160.09               | 72 344.92    | 361            | 1 136.36               |
| HY100G | 71 618.51                           | 293            | 1 280.61               | 82 408.09    | 331            | 924.21                 | 80 146.34    | 334            | 1 068.01               | 85 359.34    | 319            | 12 253.34              |
| HY110G | 105 480.13                          | 435            | 1 000.00               | 95 922.53    | 411            | 1 000.00               | 104 077.87   | 471            | 1 000.00               | 102 854.91   | 427            | 1 000.00               |
| HY120G | 355 290.59                          | 1 716          | 400.00                 | 349 844.89   | 1 681          | 400.00                 | 347 984.49   | 1 720          | 400.00                 | 339 883.18   | 1 526          | 455.00                 |
| HY130G | 85 182.97                           | 404            | 6 000.00               | 70 068.2     | 379            | 5 000.00               | 65 415.65    | 345            | 6 000.00               | 72 829.70    | 355            | 6 000.00               |
| HY140G | 1 001 619.89                        | 4 620          | 22 056.90              | 1 001 158.92 | 4 753          | 24 831.83              | 1 021 150.61 | 5 204          | 27 100.00              | 1 048 310.98 | 4 958          | 30 580.10              |
| HY170G | 597 569.80                          | 3 261          | 3 000.00               | 568 618.01   | 3 309          | 2 640.00               | 519 546.34   | 3 319          | 3 000.00               | 502 356.41   | 3 073          | 3 000.00               |

1) Data on variables related to disability pensions are not fully comparable to data from previous years due to the changes in the methodology of disability pensions. In the 2016 survey, disability pensions of persons who turned the age for old-age pensions were recorded as old-age pensions and are not included in the social transfers like it was the case in previous years.

Table 9. Comparison of individual statistics for income variables at personal level, 2016 – 2019

| SILC   | 2016 <sup>1)</sup>                 |                     |                         | 2017         |                |                        | 2018         |                |                        | 2019         |                |                        |
|--------|------------------------------------|---------------------|-------------------------|--------------|----------------|------------------------|--------------|----------------|------------------------|--------------|----------------|------------------------|
|        | Income variables at personal 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 |
| PY010G | 1 417 598.93                       | 6 024               | 61 718.61               | 1 503 127.55 | 6 524          | 63 464.12              | 1 508 330.27 | 6 925          | 66 802.18              | 1 546 787.74 | 6 538          | 73 102.55              |
| PY020G | 188 237.15                         | 717                 | 4 031.25                | 189 565.31   | 761            | 4 000.00               | 186 134.64   | 782            | 5 381.25               | 181 236.41   | 663            | 5 050.00               |
| PY030G | 1 425 502.73                       | 6 059               | 23 532.95               | 1 519 643.82 | 6 599          | 23 608.65              | 1 519 848.74 | 6 992          | 23 064.00              | 1 554 614.93 | 6 571          | 25 828.36              |
| PY035G | 35 955.24                          | 163                 | 2 000.00                | 50 631.13    | 211            | 2 938.00               | 45 696.18    | 197            | 2 500.00               | 43 765.40    | 172            | 2 518.00               |
| PY050G | 389 993.11                         | 1 910               | 15 000.00               | 386 527.89   | 1 913          | 15 732.00              | 363 125.19   | 1 989          | 16 400.00              | 391 193.87   | 1 954          | 18 000.00              |
| PY090G | 58 932.51                          | 264                 | 6 400.00                | 50 319.30    | 232            | 6 700.00               | 37 851.41    | 211            | 7 000.00               | 31 288.26    | 149            | 7 800.00               |
| PY100G | 766 764.23 <sup>1)</sup>           | 4 454 <sup>1)</sup> | 30 000.00 <sup>1)</sup> | 795 584.77   | 4 810          | 30 000.00              | 802 342.14   | 5 254          | 30 000.00              | 818 652.45   | 5 166          | 31 440.00              |
| PY110G | 203 694.87 <sup>1)</sup>           | 1 111 <sup>1)</sup> | 23 268.00 <sup>1)</sup> | 192 969.62   | 1 122          | 22 800.00              | 183 428.12   | 1 165          | 24 000.00              | 174 112.63   | 1 060          | 24 000.00              |
| PY130G | 206 981.61                         | 1 118               | 19 950.00               | 19 8034.86   | 1 098          | 20 352.00              | 202 390.50   | 1 177          | 20 280.00              | 191 093.33   | 1 096          | 19 524.00              |
| PY200G | 1 412 150.03                       | 6 002               | 5 426.07                | 1 447 149.33 | 6 280          | 5 746.27               | 1 444 548.47 | 6 649          | 6 154.91               | 1 475 616.90 | 6 234          | 6 781.42               |

1) Data for 2016 on variables related to disability pensions are not fully comparable to data from previous years due to the changes in the methodology of disability pensions. In the 2016 survey, disability pensions of persons who turned the age for old-age pensions were recorded as old-age pensions and are not included in the social transfers like it was the case in previous years.



### 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 ten-year data series for the period from 2010 to 2019 is available to users, with certain minor methodological changes concerning the compilation of some indicators. In 2015, particular income components were classified in more detail in the survey questionnaire, while in 2016, some changes were introduced in recording disability pensions. All that made certain indicators not fully comparable with the previous period.

### 5.2.2. Reasons for break in time series

The SILC 2015 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.

As regards the SILC 2016 survey, a figure that refers to the at-risk-of poverty indicator before social transfers, when social transfers have not yet been included in the income, is not fully comparable to data from previous years due to the changes in recording disability pensions. In the 2016 survey, disability pensions of persons who turned the age for old-age pensions are recorded as old-age pensions and are not included in the social transfers like it was the case in previous years.

## 6. Coherence

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

This indicator is not computed for the SILC 2019 survey.

### 6.2. Coherence – national accounts

This indicator is not computed for the SILC 2019 survey.

### 6.3. Coherence – administrative sources

This indicator is not computed for the SILC 2019 survey.

## 7. Cost and burden

### 7.1. Cost

The fieldwork costs for the Income and Living Conditions Survey 2019 amounted to 843 012.20 kuna and included costs of interviewers. 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 includes the time spent to answer to the questions in the survey questionnaire. An important factor that impacts the respondents' burden is the number of questions in the questionnaire. The Statistics on Income and Living Conditions (SILC) Survey consists of around 375 questions. Although respondents do not provide answers to every single question, participation in the Survey represents a substantial burden to the respondent because of automated skips integrated in the entry programme. The interview duration per household for the SILC 2019 survey was 151 minutes on average. It is therefore essential to reduce the burden on respondents in the next period (by using administrative data sources, etc.).