QUALITY REPORT FOR STATISTICAL SURVEY

Time Use Survey (TUS)
for 2023

Organisational unit: Crime Administration System and Social Protection Statistics Department

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0. Basic information

- Purpose and subject of the survey

The aim of the Survey is to collect statistical data on how people spend their time during working days and on their days off, what activities they engage in and how much time they devote to them as well as on the socio-economic characteristics of household members.

Time Use Survey results (hereinafter referred to as: (TUS) are used in analysis of organisation of daily life: how much time people spend on employment-related activities, household and family care, personal care, volunteering, social life and entertainment, travel and free time. These data will provide necessary information in the area of social policy creation, in various scientific analyses and international comparisons, and, in general, to inform the broad public.

- Reference period

From November 2022 to November 2023

- Legal acts and other agreements

At the national level, TUS is carried out on the following basis:

- Official Statistics Act (NN, Nos 25/20 and 155/23)
- Programme of Statistical Activities of the Republic of Croatia 2021 – 2027 (NN, No. 29/22)
- Annual Implementation Plan of Statistical Activities of the Republic of Croatia 2022 (NN, No. 42/22)
- Annual Implementation Plan of Statistical Activities of the Republic of Croatia 2023 (NN, No. 35/23).

At the EU level, TUS is carried out on the basis of the gentleman's agreement between the states participating in the implementation of this Survey and Eurostat.

Regulation (EU) 2019/1700 of the European Parliament and of the Council of 10 October 2019 establishing a common framework for European statistics relating to persons and households, based on data at individual level collected from samples, amending Regulations (EC) No 808/2004, (EC) No 452/2008 and (EC) No 1338/2008 of the European Parliament and of the Council, and repealing Regulation (EC) No 1177/2003 of the European Parliament and of the Council and Council Regulation (EC) No 577/98 applies also to the conduct of the Time Use Survey, but the Survey still remains non-mandatory.

- Statistical concepts and definitions

Private households and persons in private households (aged 15 years and over) are observation and analysis units.

In line with HETUS guidelines (from 2008), the survey should include all persons aged 10 years and over (if it is not possible, then persons aged 15 years and over) living in private households.

Household encompasses either a single person living alone (one-person household) in a housing unit or a group of two or more people who may or may not be related (multi-person household) sharing a housing unit and make common provision for food and other essentials for living (joint household). The Survey does not cover collective or institutional households (such as retirement homes, hospitals for long-term treatment, prisons, monasteries, etc.).

- Statistical unit

The target population are private households and persons in private households (aged 15 years and over).

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.).

- Statistical population

  Statistical population includes all persons with their usual residences in private households are located in each of the participating states.

- Classification system

  The implementation of this Survey is fully harmonised with the Eurostat's recommendations HETUS (Harmonised European Time Use Survey), which refers to the implementation round carried out in 2020. The aim of the agreed recommendations on the time use surveys is ensuring a unique approach to collection, processing and dissemination of data. Data of the Croatian Bureau of Statistics for the Republic of Croatia are comparable to surveys carried out in other European countries.

  The activity coding system is based on three levels. The first level has 10 activity categories, from 0 to 9 (0 – personal care, 1 – employment-related activities, 2 – study, 3 – household and family care, 4 – volunteering, 5 – social life and entertainment, 6 – sports and outdoor activities, 7 – hobbies, 8 – mass media, 9 – travel and unspecified time use). Within each of these first-level categories, there are one to nine second-level activity categories (coded at two digits). Furthermore, within each second-level category, there are one to ten third-level activity categories possible. Codes containing the word "other" include all activities that cannot be classified into any of the listed activities within the given categories.

1. Relevance

The main purpose of TUS is to gather information on how every household member (aged 15 years and over) uses his/her time within 24-hour period. TUS is the most suitable source for:

- getting statistical information to be used in a survey on the magnitude of differences between sexes by activities
- making conclusions that will serve as a basis for implementation of policies addressing gender issues, which relate to reconciliation of working and family life
- making a distinction between paid and unpaid work in quantity terms
- getting an insight on how many household members dispose of their time.

Collected data are a valuable source for deciding on relevant social policies. The Survey thus provides a detailed and useful information framework in formulating the following:

- family policies that pay more attention to the need of combining working activities and family responsibilities
- workplace policy that would be more aware of characteristics of new forms of work.

This Survey is also important from a gender equality view since it presents data on shares of women and men in basic activities and helps policy makers in monitoring and improvement of gender equality in the EU.

1.1. Data users

Data obtained in the Time Use Survey are used in the area of social policy creation, in various scientific analyses and international comparisons.

National users:

- ministries and other state administration bodies
- specialised civil society organisations
- academic community
- the media

International users:

• Eurostat (Statistical Office of the European Union)

• Organisation for Economic Co-operation and Development (OECD)

1.1.1. User needs

Government bodies: for creating social policies, in various scientific analyses and international comparisons

1.1.2. User satisfaction

The first survey on satisfaction of users of the Croatian Bureau of Statistics was carried out in 2013, then in 2015, and the most recent one at the end of 2022. The results can be checked out on the website of the Croatian Bureau of Statistics https://dzs.gov.hr/highlighted-themes/quality/user-satisfaction-surveys/686.

1.2. Completeness

The Survey is in line with the Eurostat's methodological recommendations and international standards and classifications, and covers all recommended time use activity variables.

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 target population in TUS are private (non-institutional) households and persons aged 15 years and over on the territory of the Republic of Croatia according to the 2021 Census.

Strata are defined by division into statistical regions according to the HR_NUTS 2021 classification – HR NUTS 2 (Pannonian Croatia, Adriatic Croatia, the City of Zagreb and Northern Croatia) and type of settlement (city or municipality). A special stratum within Adriatic Croatia comprises cities of Rijeka and Split together. The sample allocation with respect to statistical regions is proportional to the square root of the number of private households. In the first stage, spatial units – enumeration areas – were selected with a probability proportional to the number of private households in the enumeration area from the 2021 Census. A total of 936 enumeration areas were selected. In the second stage, five dwellings (households) were selected in each enumeration area. A total of 4 680 dwellings (households) were selected for the sample.

The sample was distributed over 52 intervals (weeks) so that an equal number of households (and enumeration areas) were selected in each interval in each region (NUTS 2). Finally, each household was randomly assigned a weekday and a Saturday or Sunday on which household members aged 15 or over kept a diary of their activities.

The response rate was 21.6%.

ESTIMATES AND MEASURES OF PRECISION FOR THE INDICATOR "AVERAGE TIME SPENT ON VARIOUS ACTIVITY CATEGORIES, POPULATION AGED 15 AND OVER, REPUBLIC OF CROATIA, NOVEMBER 2022 – NOVEMBER 2023 (HOURS AND MINUTES)"

	Estimation	Standard estimation error	Confidence interval (95%)	Variation coefficient
Personal care	11:09	6.4	05:56; 06:21	1.0
Employment	03:16	10.8	02:54; 03:37	5.5
Study	00:22	3.9	00:14; 00:30	17.9
Household and family care (unpaid work)	03:17	6.4	03:04; 03:29	3.3
Free time	04:56	8.2	04:40; 05:12	2.8
Travel	00:59	2.3	00:55; 01:04	3.9
Other	00:01	0.2	00:01; 00:02	18.4

ESTIMATES AND MEASURES OF PRECISION FOR THE INDICATOR "PARTICIPATION RATE IN EACH ACTIVITY CATEGORY, POPULATION AGED 15 AND OVER, REPUBLIC OF CROATIA, NOVEMBER 2022 – NOVEMBER 2023 (HOURS AND MINUTES)"

	Estimation	Standard estimation error	Confidence interval (95%)	Variation coefficient
Personal care	100.0	0.0	100.0; 100.0	0.0
Employment	42.7	2.2	38.3; 47.1	5.3
Study	6.8	1.2	4.5; 9.1	17.4
Household and family care (unpaid work)	91.9	1.0	89.9; 93.9	1.1
Free time	97.5	0.7	96.2; 98.9	0.7
Travel	82.9	1.5	79.9; 96.0	1.9
Other	6.9	1.2	4.4; 9.3	17.9

ESTIMATES AND MEASURES OF PRECISION FOR THE INDICATOR "AVERAGE TIME SPENT ON VARIOUS ACTIVITY CATEGORIES, POPULATION AGED 15 AND OVER WHO SPENT TIME ON EACH ACTIVITY CATEGORY, REPUBLIC OF CROATIA, NOVEMBER 2022 – NOVEMBER 2023 (HOURS AND MINUTES)"

	Estimation	Standard estimation error	Confidence interval (95%)	Variation coefficient
Personal care	11:09	6.4	10:56; 11:21	1.0
Employment	07:38	9.0	07:21; 07:56	2.0
Study	05:21	35.8	04:09; 06:33	11.1
Household and family care (unpaid work)	03:34	6.7	03:21; 03:47	3.1
Free time	05:04	7.9	04:48; 05:19	2.6
Travel	01:12	2.4	01:07; 01:16	3.4
Other	00:20	2.7	00:15; 00:25	13.4

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.

2.2.1. Coverage error

Coverage errors occur due to deviation from the sampling framework and they are measured by the overcoverage rate, which represents a share of sample units that are not a part of the target population. The TUS sampling framework was based on the 2021 Census data.

2.2.2. Overcoverage rate

Overcoverage rate is 7.1%.

The overcoverage rate is a share of sample units (occupied dwellings) that are not a part of the target population. It means that these units do not exist any more, they are not occupied or they are not intended for permanent residence (business spaces, summer houses, etc.).

2.2.3. Measurement errors

Measurement errors are considered all errors that can emerge during the collection or entering data into survey forms or in programme application of the questionnaire. There is a tendency to minimise such errors by correctly defining the survey questions, by regular training of interviewers, by applying adequate data collection method, controls built in online questionnaire and by checking the collected data during and after fieldwork. Check of collected data consists of logical check of data, centralised coding of activities entered into the time use diary, check of minimum and maximum values, logical connections between the answers, etc.

2.2.4. Nonresponse errors

Nonresponse errors refer to information on how many statistical units did not provide responses to the questionnaire, i.e., on the number of households that did not accept participation in the Survey. The nonresponse rate is 78.4%.

2.2.5. Unit nonresponse rate

Unweighted nonresponse rate is 78.4%.

Nonresponse rate represents how many statistical units did not provide responses to the questionnaire, while in this case it represents the number of households that did not accept participation in the Survey.

The weighted nonresponse rate is not computed.

2.2.6. Item nonresponse rate

The indicator is not computed.

2.2.7. Processing errors

In data processing, logical and computational checks are run for particular variables and modalities related to household and for the questionnaire for household members aged 15 years and over as well as for various elements of the time use diary in the course of individual ten-minute episode.

2.2.8. Imputation rate

The indicator is not computed.

2.2.9. Model assumption error

The indicator for this survey is not applicable.

2.3. Data revision

2.3.1. Data revision – policy

ARV data are released as final data.

Data are published in the First Release of the Croatian Bureau of Statistics, while release data are available in the Calendar of Statistical Data Issues. The users of statistical data are informed about revisions on the website of the Croatian Bureau of Statistics, on the link General Revision Policy of the CBS.

2.3.2. Data revision – practice

Provisional figures are not published for the TUS survey and therefore regular revision is not planned.

As a rule, unplanned revisions caused by events that could not be foreseen and prevented (errors in processing or definitions that were detected only later) are disseminated as soon as possible. Every release of revised data includes reasons and explanations on what caused the data revision. Users are informed about it on the website of the Croatian Bureau of Statistics.

2.3.3. Data revision – average size

The indicator is not applicable.

2.4. Seasonal adjustment

Not applicable.

3. Timeliness and punctuality

3.1. Timeliness

Timeliness shows the length of time between the end of the reference period to which the data relate until time when the data are released, expressed in the number of months.

3.1.1. Timeliness – first results

The indicator is not applicable.

3.1.2. Timeliness – final results

Timeliness of final results is T + 13 (number of months after the end of the reference period until the release of final results).

3.2. Punctuality

Punctuality is defined as a period from the actual publishing date and the target publishing date according to the Calendar of Statistical Data Issues. All publications planned in the TUS 2025 have been released in line with the Calendar of Statistical Data Issues.

3.2.1. Punctuality − delivery and publication

The Survey results were released 13 months after the end of the reference period to which the data relate. TUS results for 2022/2023 were released in the First Release of 31 December 2024, in line with the Calendar of Statistical Data Issues.

4. Accessibility and clarity

Survey results are available in electronic format on the website of the Croatian Bureau of Statistics.

4.1. First Release

Time Use Survey Results

4.2. Online database

Not available.

4.3. Microdata access

Conditions under which certain users can have access to microdata are regulated by the [Ordinance on the Conditions and Terms of Access and Use of Confidential Statistical Data of the Croatian Bureau of Statistics for Scientific Purposes](#) (NN, No. 5/23).

4.4. Documentation on methodology

Basic Notes on Methodology are included in every First Release, Statistical Report and Statistics in Line.

A more detailed description of the methodology of the national survey is released in the methodological manual HETUS for ARV, which is available on the Eurostat website ([Harmonised European Time Use Surveys](#)).

5. Coherence and comparability

5.1. Asymmetry for mirror flows statistics

The indicator for this survey is not applicable.

5.2. Comparability over time

Time Use Survey is carried out for the first time, while the expected periodicity is ten years.

5.2.1. Length of comparable time series

The Survey was caried out only once, and the length of comparable time series is 1 (in years).

5.2.2. Reasons for break in time series

The indicator for this survey is not applicable. The Survey was carried out only once.

5.3. Coherence – short-term and structural data

The indicator for this survey is not applicable.

5.4. Coherence – national accounts

The indicator for this survey is not applicable.

5.5. Coherence – administrative sources

The indicator for this survey is not applicable.

6. Cost and burden

6.1. Cost

Generally speaking, the costs related to the collection and production of statistics include costs of methodological and technical preparation for the survey, IT equipment, training of interviewers, costs of data collection (external and internal interviewers, compensation to households), costs of data processing and costs of releasing of results (material and human resources necessary for statistical production).

Costs of TUS field work implementation amounted to 50 218.15 euro (of which 843.37 euro relate to 2022, while the remaining amount was paid in 2023). A part of the amount refer to the costs for interviewers (a part of interviewers are employees of the Croatian Bureau of Statistics in branch offices, and the second part are external interviewers engaged on the basis of contractual agreement) and for compensations to households on the basis of filled-in time use diaries (households that participated in the Survey were paid a cash compensation of 19.91 euro, paid through a bank transfer to the bank account of a person who was a member of a surveyed household (head of the household, spouse or other person of age).

6.2. Burden

Time Use Survey data were collected using electronic questionnaires (CAPI method) and a time use diary in printed form.

A part of the survey data is collected by conducting interviews, that is, by filling out two questionnaires. The household questionnaire collects data on household characteristics and basic socio-demographic and other data on household members.

Since the respondents were asked to write down the activities they performed in their own words in the diaries, the activities had to subsequently be coded according to the activity classification, for the purposes of data entry and their further processing.

Additional questions included the time of filling out the diary, the assessment of the reference day (estimated satisfaction scale), whether it was a usual day or not, and the like.

In order to try to optimally implement the methodological guidelines according to which all household members aged 15 and over should keep time use diaries, and at the same time avoid unsustainable nonresponse rates, the following conditions were set:

- For a household with one person aged 15 and over, both diaries for one person had to be filled out.
- For a household with two or three people aged 15 and over, both diaries for two people had to be filled out.
- For a household with four or more people aged 15 and over, both diaries for three people had to be filled out.