INFOSOC_HHNSI_A_CY_2021_0000

National Reference Metadata in Single Integrated Metadata Structure (SIMS)

Compiling agency: STATISTICAL SERVICE OF CYPRUS (CYSTAT)

Eurostat metadata

Reference metadata

For any question on data and metadata, please contact: EUROPEAN STATISTICAL DATA SUPPORT

1. Contact

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1.1. Contact organisation	STATISTICAL SERVICE OF CYPRUS (CYSTAT)
1.2. Contact organisation unit	ICT SURVEYS
1.5. Contact mail address	STATISTICAL SERVICE OF CYPRUS CY-1444, NICOSIA CYPRUS

2. Metadata update

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2.1. Metadata last certified	05/01/2022
2.2. Metadata last posted	05/01/2022
2.3. Metadata last update	05/01/2022

3. Statistical presentation

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3.1. Data description

The **EU survey on the use of ICT in households and by individuals** is an annual survey conducted since 2002. In [Cyprus], it has been conducted since [2004].

In 2021, the survey collects data on the access to information and communication technologies (ICT), on the use of the internet, e-commerce, e-government, e-skills, as well as privacy and protection of personal data.

3.1.1. Survey name in national and English languages

ΕΡΕΥΝΑ ΧΡΗΣΗΣ ΤΕΧΝΟΛΟΓΙΩΝ ΠΛΗΡΟΦΟΡΙΚΗΣ ΚΑΙ ΕΠΙΚΟΙΝΩΝΙΩΝ ΣΤΑ ΝΟΙΚΟΚΥΡΙΑ ΚΑΙ ΑΠΟ ΑΤΟΜΑ 2021

SURVEY ON ICT USAGE AND E-COMMERCE IN HOUSEHOLDS AND BY INDIVIDUALS 2021

3.2. Classification system

The following common concepts and definitions apply under the Integrated European Social Statistics (IESS):

- the International Standard Classification of Education (ISCED) 2011 published in the following breakdowns: low (ISCED levels 0-2: no formal education, primary education or lower secondary education), medium (ISCED levels 3-4: upper secondary or post-secondary non-tertiary education) and high (ISCED levels 5-6: tertiary programmes which normally need a successful completion of ISCED 3 or 4, or second-stage tertiary education leading to an advanced research qualification);
- the International Standard Classification for Occupation ISCO-08 at the 2-digit level;
- the Classification of Economic Activities (NACE Rev.2-2008), at section level;
- the Common classification of territorial units for statistics (NUTS 1) – finer granularity of NUTS 2 is provided on optional basis by some Member states;
- the SCL - Geographical code list;
- information about household income is provided at lower level of detail.

Additional classifications used in the national questionnaire:

No deviation of classifications from ESS or other international standards and breakdowns used in data.No additional classifications used in the national questionnaire.

3.3. Coverage - sector

The ICT survey in households and by individuals covers those households having at least one member in the age group 16 to 74 years old. Internet access of households refers to the percentage of households that have an internet access, so that anyone in the household could use the internet.

3.3.1. Differences in scope at national level

No differences in scope at National Level. No deviations from EUROSTAT scope.

3.4. Statistical concepts and definitions

The survey is collecting data of internet users, individuals who have used the internet in the three months prior to the survey. Regular internet users are individuals who used the internet, on average, at least once a week in the three months prior to the survey.

This annual survey is used to benchmark ICT-driven developments, both by following developments for core variables over time and by looking in greater depth at other aspects at a specific point in time. While the survey initially concentrated on access and connectivity issues, its scope has subsequently been extended to cover a variety of subjects (for example, the use of e-government and e-commerce) and socio-economic analysis (such as regional diversity, gender specificity, differences in age, education and the employment situation). The scope of the survey with respect to different technologies is also adapted so as to cover new product groups and means of delivering communication technologies to end-users.

For more details on the methodology applicable in each survey year, please consult the Methodological Manual for the respective year on CIRCABC - Methodological Manual - Information society statistics (europa.eu).

Deviations from standard ICT concepts:

No deviations from the standrard ICT concepts and definitions provided in the annual model questionnaire and the methodological manual of the survey.

3.5. Statistical unit

Households and Individuals

3.6. Statistical population

In the ICT usage survey, the target population for the different statistical units is:
- individuals: the target population consists of all individuals aged 16 to 74;
- households: the target population consists of all (private) households with at least one member aged 16 to 74.

Target population (scope, universe) composed of households and/or individuals:

- **Number of households: 311902**
- **Number of individuals: 656708**

3.6.1. Non-compulsory age groups

Non-compulsory age groups also included in the target population:

	No	Yes	Age scope
Individuals younger than 16?	X		
Individuals older than 74?	X		

3.6.2. Population not covered by the data collection

Non-target population (the difference between the total population and the target population)	**Households**	**Individuals**
Approximate number of units outside the general scope of the survey (e.g. individuals younger than 16 or older than 74; households with all members over 74 years old).	23604	229449
Estimate of the resulting percentage of under-coverage (non-covered population compared to the total country), if applicable	7.0%	25.9%

3.7. Reference area

Government controlled areas of the Republic of Cyprus.

3.8. Coverage - Time

Year 2021

3.9. Base period

Not applicable

4. Unit of measure

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Percentages of ‘Households’ and Percentages of ‘Individuals’

5. Reference Period

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First quarter of 2021. The reference periods defined in the model questionnaire were followed.

5.1. Survey period

Beginning date: 01/04/2021

End date: 30/6/2021

6. Institutional Mandate

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6.1. Institutional Mandate - legal acts and other agreements

The legal basis for the 2021 EU survey on the use of ICT in households and by individuals is the 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 (OJ L 261 I, 14.10.2019, p. 1), as implemented by the Commission Implementing Regulation (EU) 2020/1013 of 20 July 2020 specifying the technical items of the data set, establishing the technical formats for transmission of information and specifying the detailed arrangements and content of the quality reports on the organisation of a sample survey in the use of information and communication technologies domain for reference year 2021 pursuant to Regulation (EU) 2019/1700 of the European Parliament and of the Council (OJ L 237, 20.07.2020, p. 1).

Complementary national legislation constituting the legal basis for the survey on the use of ICT in households and by individuals:

Article 3 of the national Statistics Law, No. 25(I) of 2021 defines the functions of the Statistical Service of Cyprus regarding the production and dissemination of official statistics. Moreover, Article 13, explicitly stipulates the mandate for data collection and introduces a mandatory response to statistical enquiries by stipulating the obligation of respondents to reply to surveys and provide the data required. This relates not only to national but also to European statistics which, by virtue of Article 8 of the said Law, are incorporated in the annual and multiannual programmes of work without any further procedure.

Official Statistics Law No. 25(I) of 2021: *https://www.cystat.gov.cy/en/StaticPage?id=1074*

6.2. Institutional Mandate - data sharing

Not Applicable

7. Confidentiality

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7.1. Confidentiality - policy

Official statistics are released in accordance to all confidentiality provisions of the following:

- National Statistics Law No. 25(I) of 2021 (especially Article 16 on statistical confidentiality).
- Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European statistics and its later amendments (especially Chapter 5 on statistical confidentiality).
- European Statistics Code of Practice (especially Principle 5 on statistical confidentiality).
- CYSTAT's Code of Practice for the Collection, Publication and Storage of Statistical Data.

Official Statistics Law No. 25(I) of 2021: *https://www.cystat.gov.cy/en/StaticPage?id=1074*

Regulation (EC) No 223/2009 on European statistics (consolidated text): *http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02009R0223-20150608&qid=1504858409240&from=EN*

European Statistics Code of Practice: *https://ec.europa.eu/eurostat/documents/4031688/8971242/KS-02-18-142-EN-N.pdf/e7f85f07-91db-4312-8118-f729c75878c7*

Code of Practice for the Collection, Publication and Storage of Statistical Data: *https://www.cystat.gov.cy/en/StaticPage?id=1066*

7.2. Confidentiality - data treatment

The treatment of confidential data is regulated by CYSTAT's Code of Practice for the Collection, Publication and Storage of Statistical Data.

- ***Code of Practice for the Collection, Publication and Storage of Statistical Data:*** *https://www.cystat.gov.cy/en/StaticPage?id=1066*

8. Release policy

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8.1. Release calendar

Notifications about the dissemination of statistics are published in the release calendar, which is available on CYSTAT's website. The annual release calendar, announced during the 4th quarter of the each year, includes provisional dates which are finalised the week before publication.

8.2. Release calendar access

The release calendar is available on the website of the Statistical Service of Cyprus.
Link: https://www.cystat.gov.cy/en/AnnouncementList

8.3. Release policy - user access

According to the Dissemination and Pricing Policy of the Statistical Service of Cyprus (section 2.3) CYSTAT´s main channel for dissemination of statistics is the website, which offers the same conditions to everyone and is updated at the same time every working day (12:00 noon). Privileged pre-released access (of no more than 1 day in advance) has been granted to a few selected users for specific statistics. These are specified in the Dissemination Policy (section 2.3).
In addition to the annual release calendar, users are informed of the various statistical releases through the "Alert" service provided by CYSTAT.
Notifications about the dissemination of statistics are published in the release calendar, which is available on CYSTAT's website.

The annual release calendar, announced during the 4th quarter of the each year, includes provisional dates which are finalised the week before publication.
The Release Calendar is updated every Friday and contains the following:
(a) Confirmed announcements: announcements which are scheduled to be released in the following week,
(b) Preliminary announcements: announcements to be released until the end of the year, and
(c) Published announcements: published announcements.
The data release policy of CyStat regarding the ICT data is the same as the general policy.
link: https://en.cystat.novum.international/en/StaticPage?id=1064

9. Frequency of dissemination

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Annual

10. Accessibility and clarity

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10.1. Dissemination format - News release

Results from the survey are available on the website of the Statistical Service of Cyprus under the Statistical Theme "Science and Technology / Information Society".
Link: https://www.cystat.gov.cy/en/PressRelease?id=65665

10.2. Dissemination format - Publications

Results from the survey are available on the web portal of the Statistical Service of Cyprus under the Statistical Theme "Science and Technology / Information Society".
Link: https://www.cystat.gov.cy/en/PublicationList?s=40

10.3. Dissemination format - online database

Results from the survey are available on the web portal of the Statistical Service of Cyprus under the Statistical Theme “Science and Technology / Information Society”.
Link: https://cystatdb.cystat.gov.cy/pxweb/en/8.CYSTAT-DB/8.CYSTAT-DB__Information%20Society__

10.3.1. Data tables - consultations

Not Applicable

10.4. Dissemination format - microdata access

Statistical micro-data from CYSTAT’s surveys are accessible for research purposes only and under strict provisions as described below:
Under the provisions of the Statistics Law, CYSTAT may release microdata for the sole use of scientific research. Applicants have to submit the request form "APPLICATION FOR DATA FOR RESEARCH PURPOSES" giving thorough information on the project for which micro-data are needed.
The application is evaluated by CYSTAT’s Confidentiality Committee and if the application is approved, a charge is fixed according to the volume and time consumed for preparation of the data. Micro-data may then be released after an anonymisation process which ensures no direct identification of the statistical units but, at the same time, ensures usability of the data. The link for the application is attached below.

- ***Link to the application for access to microdata on CYSTAT's website:***
https://www.cystat.gov.cy/en/MicrodataContactForm?fid=4

10.5. Dissemination format - other

Not requested

10.5.1. Metadata - consultations

Not applicable

10.6. Documentation on methodology

Summary Results describing the results of the survey illustrated with figures (see Annexes - Summary Results: ICT usage in Households and by Individuals 2021)
Enumerators Instructions (see Annexes - Enumerators Instructions ICT usage in Households and by Individuals 2021)

10.6.1. Metadata completeness - rate

Metadata completeness rate is 100%.

10.7. Quality management - documentation

CYSTAT has set its strategic goal to provide high-quality statistical information in an objective, transparent, reliable and timely manner. For this reason, CYSTAT established the "Quality Policy" which forms the basis of all statistical activities and leads towards continuous improvement of its statistical output.
Link: https://www.cystat.gov.cy/en/StaticPage?id=1070

11. Quality management

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11.1. Quality assurance

The quality of statistics in CYSTAT is managed in the framework of the European Statistics Code of Practice which sets the standards for developing, producing and disseminating European Statistics as well as the ESS Quality Assurance Framework (QAF). CYSTAT endorses the Quality Declaration of the European Statistical System. In addition, CYSTAT is guided by the requirements provided for in Article 11 of the Statistics Law No. 25(I) of 2021 as well as Article 12 of Regulation (EC) No 223/2009 on European statistics, which sets out the quality criteria to be applied in the development, production and dissemination of European statistics.
The Methodological Manual provides guidelines and standards for the implementation of the surveys in the Member States. It is updated every year according to the changed contents of the model questionnaires.

- ***European Statistics Code of Practice:***

http://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-32-11-955

- ***ESS Quality Assurance Framework (QAF):***

http://ec.europa.eu/eurostat/documents/64157/4392716/ESS-QAF-V1-2final.pdf/bbf5970c-1adf-46c8-afc3-58ce177a0646

- ***Quality Declaration of the European Statistical System:***

http://ec.europa.eu/eurostat/documents/4031688/8188985/KS0217428ENN_corr.pdf/116f7c85-cd3e-4bff-b695-4a8e71385fd4

- ***Statistics Law No. 25(I) of 2021:***

https://www.cystat.gov.cy/en/StaticPage?id=1074

- ***Regulation (EC) No 223/2009 on European statistics (consolidated text):***

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02009R0223-20150608&qid=1504858409240&from=EN

11.2. Quality management - assessment

The Methodological Manual provided by Eurostat includes the guidelines and standard quality criteria used by CYSTAT for the implementation of the survey. The Eurostat model questionnaire on ICT usage in Households and by Individuals for 2021 was used.

12. Relevance

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12.1. Relevance - User Needs

Not Available

12.2. Relevance - User Satisfaction

Since 2008 (with the exception of 2010 and 2013) CYSTAT carries out an annual online “Users Satisfaction Survey”. The results of the surveys are available on CYSTAT’s website at the link attached below.
Overall, the users of statistical data published by CYSTAT are satisfied.
https://www.cystat.gov.cy/en/StaticPage?id=1144

12.3. Completeness

All of the variables required for transmission have been included in the microdata.

12.3.1. Data completeness - rate

Data completeness rate is considered to be 100%.

13. Accuracy

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13.1. Accuracy - overall

As the results of the survey are based on a sample of population they are subject to the usual types of errors associated with sampling techniques and interviews. The data resulting from the survey are considered reliable. The estimated standard error does not exceed 2% for the overall proportions and 5% for the proportions relating to the different subgroups of the population.

13.2. Sampling error

The sampling error reflects the fact that only a particular sample was surveyed rather than the entire population. It is estimated by the standard error and can be expressed by the square root of the estimate of the sampling variance $(\hat{\sigma}_{(\hat{\theta})})$. The estimation of the sampling variance should ideally take into account the

sampling design (e.g. the stratification).
More information on methodology for calculating precision estimates is detailed in the paragraphs below.

13.2.1. Sampling error - indicators

Main indicator: "Individuals having ordered goods or services for private use over the internet in the last 12 months"
(individuals who ticked 'Within the last 3 months' or 'Between 3 months and a year ago' in question D1 of the 2021 model questionnaire)
Number of respondents *(*absolute value for 'Yes' answers*)*:1771
Estimated proportion (in %)**: 54.1**
Standard error (in percentage points)**: 0.91**
Details of the breakdowns are available in Table 13.2.1 in the Excel file "*SIMS_2021_annexes*" in the Annexes.

13.2.2. Sampling error – calculation methods for the variance estimation (SE)

The sampling error was calculated using the package ReGenesees in R. More specifically, the functions ext.calibrated, svystatTM and svystatR of ReGenesees were used.

13.2.2.1. Sampling error – estimation method - name

Estimation method(s) for the random variation of an estimator due to sampling:

Analytic method	
Linearization methods	
- Taylor linearization	X
- Linearization based on influence functions	
- Other:	
Replication Methods	
- Jackknife	
- Bootstrap	
- Balanced repeated Replication / Balanced half-samples	
- Random Groups	
- Other:	
Other:	

13.2.2.2. Sampling error – estimation method – basic formula

Not applicable

13.2.2.3. Sampling error – estimation method – used tools

Tools used to estimate sampling errors:

CLAN	
GENESEES	
SUDAAN	
POULPE	
CALJACK	
BASCULA	
ReGenesees	X
Other:	

13.2.2.4. Sampling error – estimation method - associated effects

The method used to assess the standard errors takes into account the following specific effects:

Unit non-response: The variance estimator has to be adjusted to take unit non-response into account. Different methods can be used: methods based on the assumption that respondents are missing at random or completely at random within e.g. strata or constructed response homogeneity groups, methods using the two-phase approach, etc.	**X** The initial weights (grossing-up factors) are adjusted in order to take into account non-response. $FactorHHij = \frac{Nij}{nij*rij}$ where, i=1,3,4,5,6 (district) and j=1,2 (urban or rural) Nij = Total number of households in stratum ij in the population nij = Total number of households in stratum ij in the sample rij = Response rate in stratum ij These adjusted weights are used in ext. calibrated
Name of the method:	
Imputation: Imputation variance can be estimated if multiple imputation is used. Replication and analytic methods can be used to incorporate imputation into variance estimation. Deville and Särndal (1994) proposed a method for the regression imputed Horvitz-Thompson estimator.	
Name of the method:	
Coverage errors (over-coverage, multiple listings): Methodology of domain estimation can be used. Target population has to be defined as a domain of the frame population. The related loss of precision can be quantified.	
Name of the method:	
Implicit stratification: One way to consider implicit stratification is to define explicit strata, from which each of an independent sample is supposed to have been selected. Other methods using analytic formulae are available.	
Name of the method:	
Rotating samples: In case of rotating sample schemes, the overlap of samples between e.g. successive quarters reduces the precision of the average of estimates from e.g. quarterly samples and increases the precision for e.g. the quarter-to-quarter estimates of change.	
Name of the method:	
Calibration: Methods to account for the effect of calibration on variance should be used, e.g. Deville and Särndal method (1992).	X The adjusted weights are calibrated using the tool calif so that the population by age (five-year age groups) and sex and the total number

	of households are consistent with the demographic estimates. The calibrated weights are used in ext.calibrated.
Name of the method:	

13.2.2.5. Sampling method – estimation method - references

Not available

13.2.3. Sampling error - comments

Additional comments on the reliability and representativeness of the results of the indicators : No comments

13.3. Non-sampling error

See more details on non-sampling error below.

13.3.1. Coverage error

Not Applicable

13.3.1.1. Over-coverage - rate

Not Applicable

13.3.1.2. Common units - proportion

Not Applicable

13.3.2. Measurement error

1) **Measurement errors**: Not applicable

2) **Questionnaire design and testing:** The questionnaire used was the model questionnaire provided by Eurostat. No additional efforts were made regarding the questionnaire design and testing.

3) **Interviewer training:**

The interviewers engaged for the survey were trainned before the begining of the survey. During the training the interviewers were trained in the:

- different aspects of the questionnaire (different topics covered by the survey, consepts and definitions)
- interview techniques
- the use of CAPI and CATI
- procedures regarding the day to day operation of the survey (colection of questionnaire, delivery of completed questionnaires, clarifications regarding the data collected, travelling, etc.)

They were also provided with a set of enumerators instructions (see annex attached-Enumerators Instructions - ICT usage in Households and by Individuals 2021). During the survey period they deliver the completed questionnaires on a weekly basis and they are monitored on a regularly basis by the the responsible officer (supervisor).

13.3.2.1. Proxy interview rates

Not Applicable

13.3.3. Non response error

Main characteristics of non-respondents: The non respondents were non contacts and refusals.

13.3.3.1. Unit non-response - rate

The unit response rate is the ratio of the number of in-scope respondents (= the number of achieved interviews or the net sample size to the number of eligible elements selected from the sampling frame).

Unit non-response rate for

Households: 5.9

Individuals (aged 16-74)**: 0.2**

13.3.3.1.1. Unit non-response – calculation details

	Number of households	Number of individuals		
		(aged 16-74)	(< 16)	(> 74)
Gross sample [A] The number of households/individuals initially selected from the sampling frame (if not applicable, indicate why below the table) See also §18.1.3.11	2200	4677		
Type of unit non-response (ineligible cases) [B]				
Ineligible: out-of-scope [B1] E.g. when a selected household is not in the target population because all members are over 75 years old	56	960		
Other ineligible [B2] E.g. when no dwelling exists at the selected address or a selected individual has died between the reference data of the sampling frame (cf. §18.1.1.2) and the moment of the interview.	250	74		
Number of eligible elements [B]: Gross sample size corrected of the ineligible cases **[[B] = [A] – [B1] – [B2]]**	1894	3643		
Type of unit non-response (eligible cases) [C]				
Non-contact [C1] E.g. when no one was at home or postal survey was never sent back.	28			
Refusal [C2] E.g. when a selected household or individual was contacted but refused to take part in the survey.	84	8		
Inability to respond [C3] E.g. when a selected household or individual was unable to participate due to language barriers or cognitive or physical incapacity to respond.				
Rejected interviews [C4] E.g. when the selected household/individual did take part but the survey form cannot be used (poor quality - strong inconsistencies; unacceptable item-response – individual left most of the questions unanswered; survey form got lost and interview cannot be repeated; etc.).				
Other unit non-response [C5] Please specify the other types of non-response encountered. Note: please add the other non-response related to ineligibility of the selected elements above.				
Net sample size or final sample **[C] = [B] – [C1] – [C2] – [C3] – [C4] – [C5]]**	1782	3635		

Unit response rate [D]:

The unit response rate [D] is the ratio of the number of in-scope respondents (= the number of achieved interviews or the net sample size [C] to the number of eligible elements selected from the sampling frame

[B])				
[D] = [C] / [B]	94.1	99.8		
Comments, if any:				

13.3.3.1.2. Unit non-response – specific issues

1) Methods used for minimizing unit non-response:

The methods used in order to minimize the unit non-response were:

- interviewers tried to obtain the telephone numbers by leaving a letter explaining the situation and asking households to call them and arrange for an interview
- interviewers tried to find the telephone numbers of the households through the corresponding municipalities
- in case of a member's absence, the interviewer would revisit the household or contact the household member by telephone

2) Methods used for dealing with unit non-response:

The initial weights (grossing-up factors) are adjusted in order to take into account non-response.

$$FactorHHij = \frac{Nij}{nij*rij}$$

where, i=1,3,4,5,6 (district)

and j=1,2 (urban or rural)

Nij = Total number of households in stratum ij in the population

nij = Total number of households in stratum ij in the sample

rij = Response rate in stratum ij

3) Interviewers may be allowed for proxy interviews (i.e. another person in the household than the one who was randomly selected can answer the questions):

Proxy interviews were allowed only in the case of persons that were not at home or it was difficult to contact them. In this case someone else in the household was interviewed

4) Substitution rate (in %)**: 16.7%**

13.3.3.2. Item non-response - rate

Items with low response rates and their observed rates (in %)**: Item non-response rate: 0%**

13.3.4. Processing error

Not Applicable

13.3.5. Model assumption error

Not Applicable

14. Timeliness and punctuality

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14.1. Timeliness

Date of data dissemination at national level was the 23rd of December, 2021.

14.1.1. Time lag - first result

The end of field work was the 30/6/2021.

The first fully validated delivery of data to Eurostat was the 30th of September, 2021.

The length of time (in days) between the end of fieldwork and the first fully validated delivery of data to Eurostat (full validation of the dataset by EDIT) was 91 days.

14.1.2. Time lag - final result

The end of field work was the 30/6/2021.

The first fully validated delivery of data to Eurostat was the 30th of September, 2021.

The last fully validated delivery of data to Eurostat was the 4th of October, 2021.

The length of time (in days) between the end of fieldwork and the delivery of final results to Eurostat was 96 days.

14.2. Punctuality

The last fully validated delivery of data was on the 4th of October, 2021, one day earlier than the target date.

The time lags (in days) between the actual delivery of the data and the target date was -1 days.

14.2.1. Punctuality - delivery and publication

The time lags (in days) between the actual delivery of the data and the target date was -1 days.

15. Coherence and comparability

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No deviations from the model questionnaire or the concepts described in the Methodological manual that would affect the comparability of data.

15.1. Comparability - geographical

No problems regarding the comparability between regions of the country.

15.1.1. Asymmetry for mirror flow statistics - coefficient

Not relevant

15.2. Comparability - over time

Possible limitations in the use of data for comparisons over time: Not Relevant

15.2.1. Length of comparable time series

The length of comparable time series depends on the module and variable considered within each of the modules of the survey.

15.3. Coherence - cross domain

Not applicable

15.3.1. Coherence - sub annual and annual statistics

Not applicable

15.3.2. Coherence - National Accounts

Not applicable

15.4. Coherence - internal

All statistics are coherent within the dataset.

15.4.1. Questionnaire 2021 – mandatory questions

MANDATORY questions in the Eurostat model questionnaire 2021:

Table 15.4.1 of the annexed file "***SIMS_2021_annexes****" lists* the questions that do not reflect the coverage of subjects and characteristics of Annex 2 of the Commission Delegated Regulation (EU) 2020/1432 of the 14 July 2020.

15.4.2. Questionnaire 2021 – optional questions

Adoption of OPTIONAL questions and items in the Eurostat model questionnaire 2021:

Table 15.4.2 of the annexed file "***SIMS_2021_annexes****" lists* the optional questions from the annual Eurostat model questionnaire 2021 included in the national questionnaire and their coverage for age groups beyond the standard scope.

15.4.3. Questionnaire 2021 – additional questions at national level

Additional questions introduced in the national questionnaire:

Three additional questions introduced in the national questionnaire

A2. Do you or anyone in your household have access to any of the following type of computer at home? a) Desktop computer, b) Laptop computer, c) Netbook, d) Tablet and e) None of the above

A5. What is the maximum contracted download speed of the fastest fixed Internet connection of your household? a) Less than 10 Mbit/s, b) At least 10 Mbit/s but less than 30 Mbit/s, c) At least 30 Mbit/s but less than 100 Mbit/s and d) At least 100 Mbit/s

A6. Why does your household not upgrade this connection to higher data transfer speeds (more than 100 Mbit/s)? a) Unnecessary, b) High cost, c) Lack of skills and d) No proper broadband connection in the area

15.4.4. Questionnaire 2021 – deviations effects

Effects of deviations from the routing used in the Eurostat model questionnaire:

The additional questions were not used as filter questions, and thus the routing used in the Eurostat model questionnaire was not affected.

16. Cost and Burden

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1) Costs and burden of the survey: Not available
2) Average time used for answering the survey questionnaire: approximetely 8 minutes per person
3) Measures taken to reduce the cost and burden of the survey: In order to improve the efficiency CAPI and CATI was incorporated during the survey period.

17. Data revision

Top

17.1. Data revision - policy

A data revision policy is in place at CYSTAT. It is published on CYSTAT's web portal, at the following link: https://www.cystat.gov.cy/en/StaticPage?id=1072

CYSTAT also publishes a list of scheduled revisions (regular or major revisions), also published on its website, at the following link:

https://www.cystat.gov.cy/en/AnnouncementList

17.2. Data revision - practice

Not Applicable

17.2.1. Data revision - average size

Not relevant

18. Statistical processing

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18.1. Source data

The source of the raw data is described with more details in the paragraphs below.

18.1.1. Sampling frame

More details on the description of the methods used to obtain or create the sampling frame.

18.1.1.1. Short description

Name and short description of the sampling frame or register used:

ICT usage in Households and by Indiciduals, 2021. Survey questionnaire in Greek and English is attached.

The sampling frame used for the selection of the sample was the 2011 Population Census Frame, with reference date the 1st of October 2011. The units listed therein are households. Districts, municipalities, quarters, addresses, names, telephone numbers are also included in the frame for each household. The 2011 Census frame was updated in September 2020 with all the domestic consumers of electricity that were connected after Census 2011, obtained from the Electricity Authority of Cyprus.

There is one-to-one correspondence between the domestic consumer of electricity and the statistical definition of households.

In order to reduce the burden on respontents, households selected in other surveys and in ICT surveys in previous years, are excluded before the selection of the sample. However, grossing up factors are based on the frame before exclusion of these households.

No RDD (Random Digit Dialing) was used.

18.1.1.2. Type of source

No the sample is not drawn from another survey or from a micro census or from a master sample.

18.1.1.3. Survey vehicle

The survey is considered to be a combined survey since it includes some additional national questions. Three national questions not foreseen in the EU questionnaire were included in the survey. The total burden of those national questions is estimated to be less than 9 responses.

Three questions refer to the household.

The questions refer to the type of computer used at home, the maximum contracted download speed of the fastest fixed Internet connection of the household and the reasons why the household does not upgrade to higher data trensfer speeds.

18.1.1.4. Survey participation

The survey is mandatory.

18.1.1.5. Shortcomings

The sampling frame used was the 2011 Population Census Frame which has as reference date the 1st of October 2011 and thus the problem of timeliness may exist. In order to tackle this problem the Population Census Frame is updated with the domestic consumers of electricity that were connected after the Census, obtained from the Electricity Authority of Cyprus. However, the information of 2011 Population Census Frame has not been updated. The information of 2011 Population Census Frame will be updated with the results of the next Census in 2021.

18.1.2. Sampling design of the survey

Characteristics of the sampling design are detailed below.

18.1.2.1. Sampling design(s) – probability design

The sampling design is a probability design: Yes

18.1.2.2. Sampling stages

1) **Number of sampling stages**:		
One stage sampling in urban areas and two stage sampling in rural areas.		
2) **First stage – Stratification:**		
There is explicit startification. The stratification variables are district and type of residence: urban / rural.		
3) **First stage - Method used to select the sample (for the sampling units)**:		
Exhaustive selection		
Simple random sampling		X
Systematic sampling with equal probabilities:		
	with stratification effect	
Related auxiliary variable:		
	without stratification effect	
Systematic sampling with probabilities proportional-to-size		X
	with stratification effect	X
Related auxiliary variable:		

without stratification effect	
Other proportional-to-size (pps) sampling:	
Other:	

4) **First stage – Unit:**

The villages/complexes of each district are the Primary Sampling Units in rural areas. In urban areas, the households are the Primary Sampling Units.

5) **Self-representing primary sampling unit:**

Some villages are large and therefore their probability of selection is equal to 1.

6) **Second stage – Unit:**

Households in rural areas

7) **Ultimate stage - Unit:**

Household

18.1.2.3. Individuals interviewed in the household

Number of individuals interviewed in the household: ALL

18.1.2.4. Longitudinal component

No Longitudinal Component

18.1.2.5. Sampling design - Additional information

In rural areas, two-stage sampling is used. Villages are the primary sampling units, while households are the secondary sampling units. Neighbouring Villages with a small number of households are merged in order to create complexes with a minimum number of households. The sample of villages is selected with probability proportional to the size of the village (PPS). A simple random sample of households is selected from each village. The sample size of households is the same for all villages / complexes.

18.1.3. Sample size

1) **GROSS sample size**

Number of households/individuals initially selected from the sampling frame:

Number of households	Number of individuals		
	(aged 16-74)	(< 16)	(> 74)
2200	4677		

2) **NET sample size**

Number of households/individuals that can be used in the final database:

Number of households (with at least one member in the age band 16-74)	Number of individuals (only within the age band 16-74)
1782	3635

18.1.4. Net effective sample size

Restricted from publication

18.2. Frequency of data collection

Annual

18.3. Data collection

1) Methods used to gather data: Telephone Interviews and face to face interviews

2) Short description of the survey method: The survey was scheduled to be conducted with face to face interviewers and the use of CAPI. However, due to the covid-19 measures enforced, face to face interviews were forbidden during the early stages of the survey period. Telephone interviews with the use of CATI were

conducted during that period. The telephone interviews were conducted by the interviewers who were responsible for the face to face interviews and they worked from home. Face to face interviews with the use of CAPI resumed as soon as the Covid 19 measures ended.

18.3.1. Variables completed from an external source

No variables were completed from an external source

18.4. Data validation

The data validation tool provided by EUROSTAT was used.
Year to year checks were also carried out before data transmission.

18.5. Data compilation

Overview of the data compilation process:
No imputation occured therefore imputation rate is 0%. No imapct of imputation.
Grossing up procedures (weighting, calibration) and details in 18.5.3.
Details related with non-responce in 13.3.3

18.5.1. Imputation - rate

Imputation Rate (% of observations): 0%
Imputation Rate (share of estimate): 0%

for the question:
Individuals having ordered goods or services for private use over the internet in the last 12 months (individuals who ticked 'within the last 3 months' or 'between 3 months and a year ago' in question D1 of the 2021 model questionnaire)

18.5.2. Imputation methods used

1) **Methods used to impute item non-response:**

None	X
Deductive imputation An exact value can be derived as a known function of certain characteristics (e.g. the value received for a family allowance is a known function of certain characteristics like income class, age of children, etc. As soon as those characteristics are known, it becomes possible to calculate the value of a family allowance without error.)	
Deterministic imputation Deterministic imputation leads to estimators with no random component, that is, if the imputation were to be re-conducted, the outcome would be the same	
Mean/Median	
Mean/Median by class	
Regression-based	
Donor	
Other:	
Random imputation Random imputation leads to estimators with a random component, that is, if the imputation were re-conducted, it would lead to a different result.	
Hot-deck	
Cold-deck	
Simulated residuals	
Other:	
Multiple imputation Multiple imputation methods offer the possibility of deriving variance estimators by taking imputation into account. In multiple imputation each missing value is replaced (instead of a single	

value) with a set of plausible values that represent the uncertainty of the right value to impute. The incorporation of imputation variance can be easily achieved based on the variability of estimates among the multiply imputed data sets.

2) **Additional Issues:**

No additional Issues

18.5.3. Grossing-up procedures

Grossing up procedures have been applied to: the households.

Description of the weighting procedures:

The initial weights (grossing-up factors) are defined as the inverse of the probability of selection in each stratum, adjusted in order to take into account unit non-response.

$$FactorHHij = \frac{Nij}{nij*rij}$$

where, i=1,3,4,5,6 (district)

and j=1,2 (urban or rural)

Nij = Total number of households in stratum ij in the population

nij = Total number of households in stratum ij in the sample

rij = Response rate in stratum ij

The adjusted weights are calibrated using the tool calif so that the population by age (five-year age groups) and sex and the total number of households are consistent with the demographic estimates.

Grossing-up procedures for individuals: All the individuals in a household have the same weight which is equal to the household weight.

18.6. Adjustment

Not relevant

18.6.1. Seasonal adjustment

Not relevant

19. Comment

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No other comments

Related metadata

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Annexes

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Summary Results: ICT usage in Households and by Individuals 2021
Enumerators Instructions - ICT usage in Households and by Individuals 2021
SURVEY QUESTIONNAIRE GREEK
SURVEY QUESTIONNAIRE ENGLISH
INFOSOC_HHNSI_A_2021_CY