The big Estonian population E-census

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Topics

• Preparations for register-based census in Estonia
• Methodology of Estonian population and housing census 2021
• Data collection: administrative registers and sample survey
• Media and communication activities
• Data publication
Preparations for register-based census in Estonia

• In the early 2000s, extensive studies to identify the data gaps in registers were done in order to be able to conduct a register-based census in the future.

• Introduction of the new Official Statistics Act in 2010, which
  • gave Statistics Estonia the task to start preparing for a register-based census;
  • provided the stipulation of the task of comparing 2011 census data with data in registers.

• Assessment and improvement of the quality of registers in cooperation with register holders.

• Development and testing of algorithms for calculating census variables based on register data.

• By 2014, almost all census characteristics were covered by registers, with the exceptions of occupation and place of work variables.
Developments in registers

- Adding personal identification codes to people, dwellings and companies, which enables to link the data of different registers.
- Harmonisation of definitions in various registers.
- Digitisation of archival documents of registers.
- Adding new indicators to registers, e.g. occupation and place of work.
- Data transmission agreements with register holders.
- Automation of data transfer.
Main developments for register-based census in recent years

• Two pilot censuses were carried out – in 2016 and 2019. Both confirmed that all the characteristics formed on the basis of registers comply with international quality requirements.

• Development of an index methodology for correcting inaccuracies concerning place of residence in registers:
  • Residency index – indicates the probability of a person being a resident of Estonia. Residency is calculated on 33 signs of life in 17 registers. Residency index has been used in population statistics since 2016;
  • Location index – answers the question of where a person lives;
  • Partnership index – answers the question of with whom a person lives.
The census moment was at 00:00 of 31st December, 2021.

Population and Housing Census 2021

All mandatory census variables  
Combination data from various registers

Additional variables collected for domestic needs
CAWI-CATI/CAPI Mandatory for residents living at sample addresses

Register-based census covers whole population

Sample survey + voluntary respondents
CAWI Optional for all residents, who can respond online

Cell key method used to ensure confidentiality in publications
Activities for register-based census

• Data from registers and databases were collected with nearly 200 different datasets according to agreed structures, channels, and deadlines.

• Data were collected from January to mid-August 2022.

• Based on the register data, 46 international and 7 domestic indicators were calculated.
Main actions related to address-based sample survey

- Negotiations with domestic data users regarding census variables and methodology – final agreement concluded in February 2021.
- Development of a new weighting methodology combining sample and voluntary responses.
- Development of survey questionnaire. Data were collected via Blaise application.
- Development of performance indicators for monitoring of data collection.
Address-based sample survey for domestic needs

• Survey was carried out in two phases:
  • From 28.12.2021 to 22.01.2022, all people living in Estonia were welcome to answer the online survey.
  • From 01.02.2022 to 28.02.2022, interviewers made contact via phone with people living at sample survey addresses; responding was mandatory for them.

• The random sample – 41,000 addresses – was selected from all municipalities to ensure the error of the indicators at municipality level would be less than 5%.

All responses are taken into account!
Survey schedule

- All 15+ persons can answer
- Parents respond for minors (15–17-year-olds)

CAWI answering
28 DEC 2021 – 22 JAN 2022

Intermediate processing
23–31 JAN 2022

- Finding sample survey addresses where at least 1 person did not respond online

CATI/CAPI interviewing
01–28 FEB 2022

- Identifying persons who did not respond online
- Conducting phone or face-to-face interviews with persons living at sampled addresses
- Identifying vacant dwellings
Challenges of survey

- Due to late decision on the need to conduct an additional survey, all preparations had to be made in a very short period of time (less than a year).
- Minimum CAPI was used due to high risk of COVID-19 spread. Weekly decisions were made based on risk level. Only vaccinated interviewers were allowed to interview people face-to-face. Interviewers took safety measures to prevent falling ill and spreading the virus.
- Identifying by phone the people who had not responded online.
- All dwellings were not reached due to extreme winter conditions.
- Rising energy prices and increased security risks had heightened people’s stress level and responding to the census questionnaire was not a priority.
Media and communication
Advertising campaign

Before CAWI 18 OCT–28 NOV 2021
- Articles on methodology
- Invitation to update residents' data in the registers
- Advertising on TV, in digital and outdoor media

CAWI period 28 DEC 2021–22 JAN 2022
- Invitation to participate in the e-census
- From 29.12.2021: digital, radio (incl. in-store radios), and print advertising; video clip on TV
- 03.–22.01.2022: TV campaign

CATI/CAPI period 01–28 FEB 2022
- Reporting on survey participation
During the year, the number of news media mentions of the census was nearly 500, 60% of these in the CAWI period, 100 per week.

Census communication earned 2nd place at national advertising awards.
Data publication

Compared with the 2011 census, 2021 census data are released much earlier.

All data will be published within 7 months – from 1 June to 15 December 2022 – compared with the 2-year period of 2011 census.

Data are published in:
- Statistical database
- News (press releases, press conferences)
- Articles
- CensusHub
- Microdata available in a secure workplace
- Grid maps
References and more information


• Population and housing census website www.census.ee/ available in Estonian, English, and Russian

• Survey questionnaire: 2021._aasta_rahvaloenduse_valikuuringu_küsimustiku_paberversioon_EN.pdf

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Thank you!

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