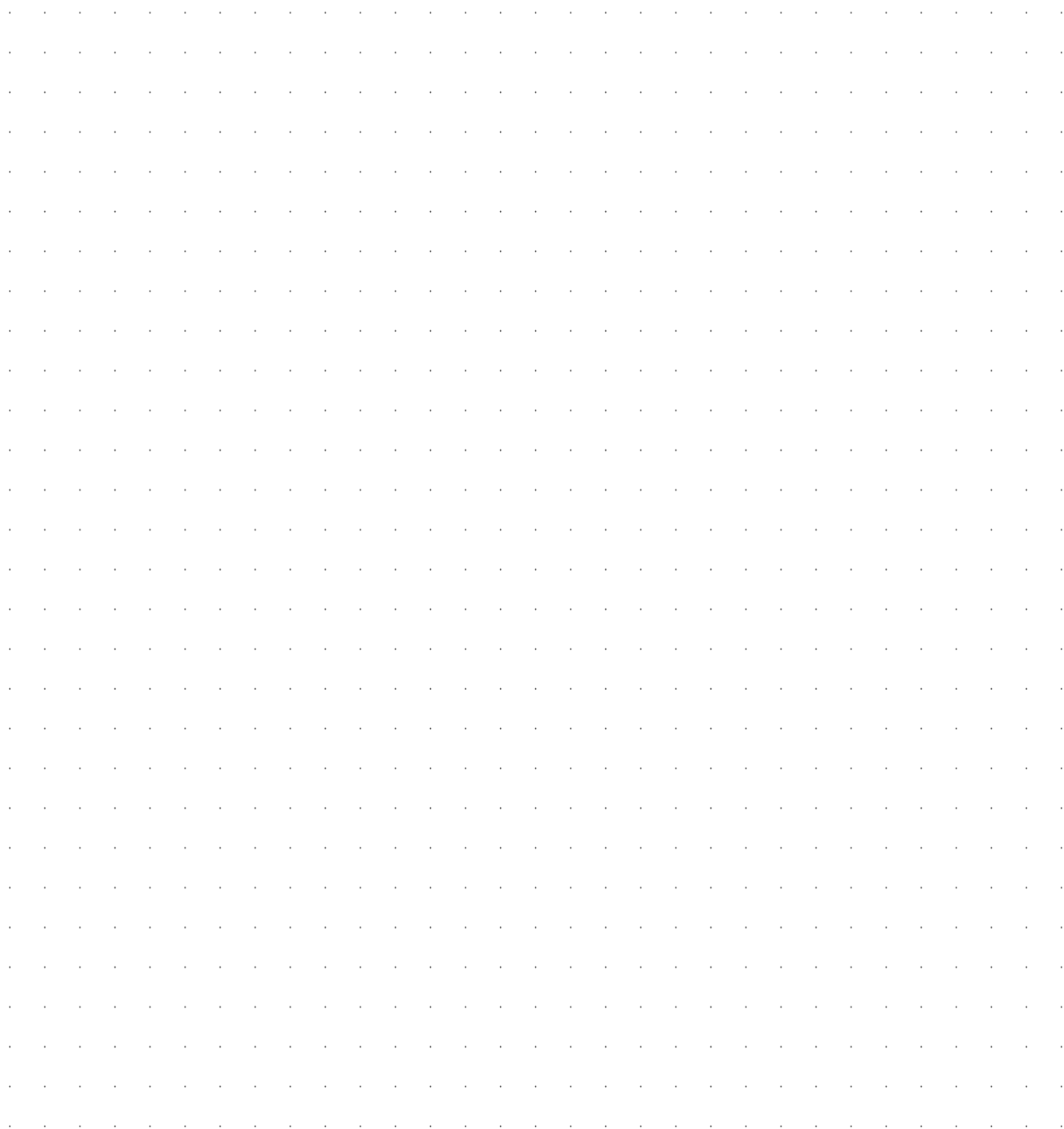


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Annual report

2021



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Contemporary statistics is founded on cooperation, reliability and innovation

The mission of Statistics Estonia is to reflect the situation and changes in the Estonian society and offer public agencies and other interested parties information that is important for the demographic, social, economic and environmental development of Estonia. Such information is necessary for making development plans and projections, for policy planning, for scientific and applied research, and for making informed decisions. Our main aim is to offer relevant information to various stakeholders and contribute to high-quality public debate.

Statistics Estonia's activities are guided by three core values: **reliability, cooperation and innovation**. These values are also the foundation of the 16 principles defined in the European Statistics Code of Practice, which sets the practices and standards for the statistical authorities participating in the European Statistical System. In 2021, a Eurostat expert committee thoroughly assessed Statistics Estonia's compliance with the principles of the European Statistics Code of Practice and therefore with our values. The expert team's final report will be published in the first quarter of 2022.

One of the indicators of the **reliability** of Statistics Estonia is compliance with the release calendar, which in 2021 was **98.97%**. Materials produced by Statistics Estonia are published in the media, which shows their confidence in us. Last year, the number of media mentions reached **8,236**. Society values data more and more as well: in 2021, our websites were visited **1.66 million times** – over one hundred thousand more visits than in 2020. In 2022, we will continue to adopt new datasets and big data to reduce the administrative burden of respondents.

In 2021, we continued preparations for the **population and housing census of 2021** to ensure its successful conduction. This time **innovative** methodology is applied: the census is largely register-based. Our innovative solutions in combining data and developing census methodologies have also attracted attention abroad.

75% of national statistical activities are based on European Union legislation. In the context of inclusive and sustainable economic growth and social cohesion, indicators of the social as well as economic and environmental sphere play an important role. As a result of hard work, as of 2021, social statistics is produced under a harmonised framework. As components of the mandatory statistics of the European Union, the EU regulations concerning agricultural, environmental and energy statistics were updated in 2021. In other areas the updating of legislation will continue in 2022. Accurate, up-to-date and relevant indicators are the prerequisites of responsible policy formation. The updated multisectoral framework regulations help improve the quality of indicators.

For analyses of various fields, a more extensive and diverse use of the available (register) data has become of greater significance. That has been important to Statistics Estonia as well. The recent health crisis highlighted a need for quickly and flexibly accessible information, even if only preliminary.

In 2021, in order to promote **cooperation**, we formed an interministerial working group for official statistics. The purpose of the group is to determine the data requirements in the early stages of policy development, to improve national cooperation in drafting EU legislation, and to better fulfill the data need of policymakers.

Statistics Estonia is also responsible for data governance in Estonia. In 2021, we surveyed 44 state agencies and 233 databases and obtained a good overview on how to proceed. Statistics Estonia participated in the development of a data governance tool for state agencies. The application will be released in the spring of 2022. A four-year reform programme of creating and developing a centre of

excellence for data governance and open data was launched, with the aim of ensuring better coordination of data governance.

We have once again taken several steps forward on the path of national and international recognition we set out on in previous years. In 2021, Statistics Estonia was rated 11th – the highest ranking so far – in a survey of the reliability of institutions. In addition, the Eurostat peer review expert team that visited us in September commended our leaps of improvement over the past five years. Such acknowledgments set the bar high for the coming years and inspire us to keep moving forward.

Urmet Lee

Director General of Statistics Estonia

Fulfilment of the 2021 statistical programme

Each year, the Government of the Republic approves for the following five years a list of demographic, social, economic and environmental statistical activities. In the statistical programme for 2021–2025, there were 68 statistical activities listed, with a total cost of nearly 11.5 million euros. In 2021, there were 63 statistical activities classified under main statistics carried out annually, including 10 cyclical statistical activities. In addition, experimental statistics, data governance and management of the classifications system, and three statistical registers were considered statistical activities.

In 2021, the most statistical activities, both in terms of the number and cost, were in the domain of economy, followed by statistical activities in the domain of social life. Table 1 gives a more detailed overview of the distribution of statistical activities by domain.

Table 1. Statistical activities by domain, 2021

Domain	Number		Cost	
	number	%	thousand euros	%
Main statistics	63	93	10,247	89
Environment	4	6	440	4
Economy	42	62	5,637	49
Population	3	4	1,610	14
Social life	12	18	2,444	21
Multidomain statistics	2	3	116	1
Statistical registers	3	5	1,239	11
Experimental statistics	1	1	0	0
Data governance and management of the classifications system	1	1	43	0
Total	68	100	11,529	100

Statistical activities are carried out on the basis of European Union legislation or commissioned nationally (primarily strategic plans, international statistical requirements). Table 2 shows that in 2021, 74% of statistical activities were based on European Union legislation, accounting for 75% of the total cost.

Table 2. Statistical activities by demand, 2021

	Cost		Number	
	thousand euros	%	number	%
European Union legislation	8,660	75	50	74
Commissioned nationally	2,869	25	18	26
Total	11,529	100	68	100

The statistical programme of 2021 was successfully fulfilled: all the planned activities were performed. There were a total of 877 releases, of which 763 were statistical database objects and 114 were news releases. The produced statistics are made available to users first in the statistical database and then through other products. Users are informed about the produced statistics via the release calendar. In 2021, there were 9 deviations from the release calendar, which constitutes 1.03% of the total number of releases

(See Table 3). The main reason for the deviations was the delayed receipt of data and increased volume of data processing.

Table 3. Deviations from release calendar, 2017–2021

Year	Statistical database	News releases	Statistical publications ¹	Total	Share in total number of releases, %
2017	19	0	3	22	2.3
2018	3	1	1	5	0.5
2019	9	1	1	11	0.2
2020	21	0	0	21	2.4
2021	9	0	–	9	1.03

Changes in statistical activities in 2021–2025

Composition of official statistics in 2021 remained broadly unchanged compared to 2020. The year 2021 was marked by complementation and amendment of the composition of the harmonized and mandatory statistics of the European Union, to better align it with the recently changed social and business environment and environmental and energy policy. Europe needs more accurate data in order to assess the effectiveness of green transition activities, digitization, and changes in economic and working life.

Changes in main statistics in 2021–2025 concern additional cyclical statistical activities, methodological changes due to amended legislative acts, methodological changes to reduce the administrative burden of data providers, and requirements of new national development strategies.

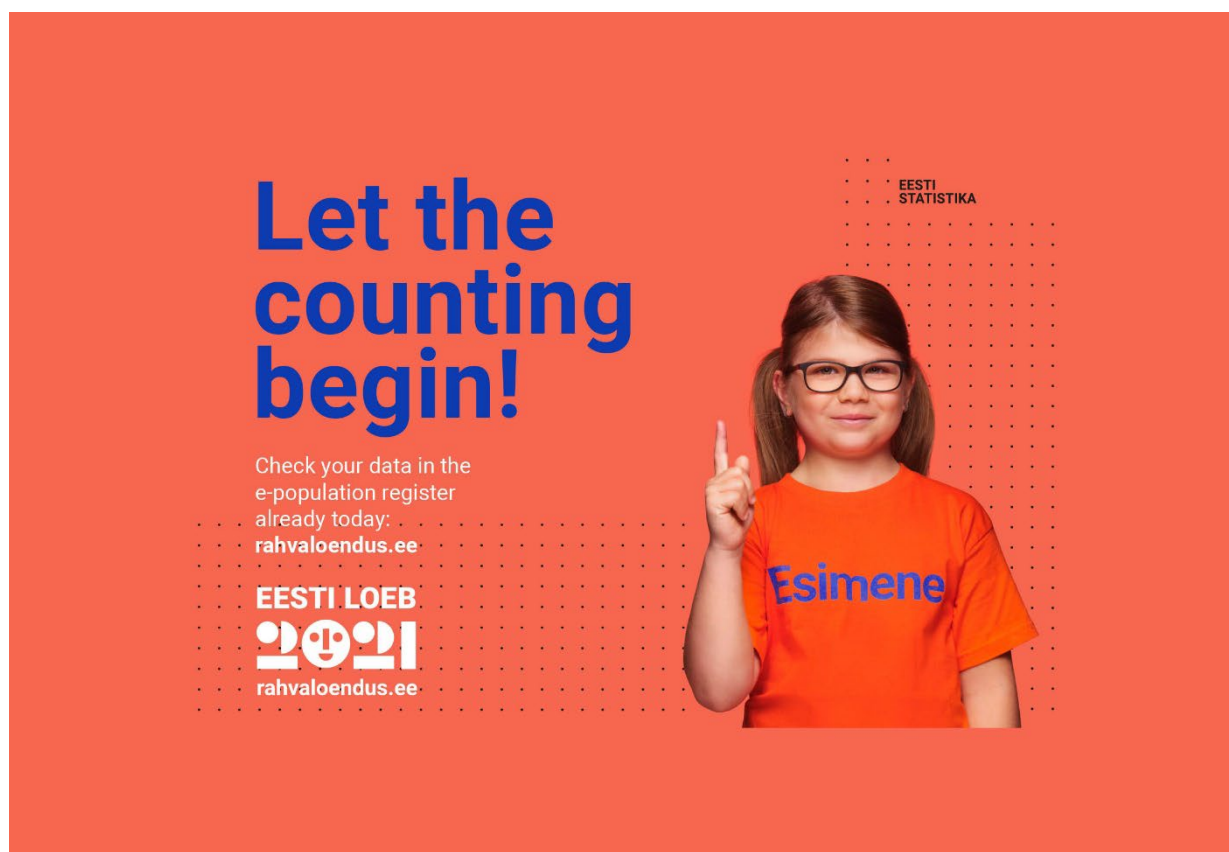
The biggest methodological changes leading to an increase in the volume of statistical activities result from the requirements of various sectoral policies agreed in the European Union.

- In the domain of environment, it is planned to make mandatory the environmental accounts modules of the Regulation (EU) No 691/2011 concerning ecosystem accounts, forest accounts, water accounts and environmentally related transfers (subsidies).
- In connection with the framework regulation (EU) No 2019/2152 of European Union business statistics, the methodology and output indicators continued to be reviewed. The changes will apply according to the adoption of the implementing provisions of the said framework regulation and the deadlines for implementation established in these.
- The agricultural statistics system of the European Union will be updated and complemented in the light of the new Common Agricultural Policy, the European Green Agreement, climate change, and environmental policy changes.
- In the domain of social life, the changes in methodology are due to the alignment of statistical activities with the new social statistics framework Regulation (EU) No 2019/1700.
- In 2021, the EU institutions agreed on updating annual and monthly as well as short-term energy statistics. The corresponding energy statistics Regulation (EU) No 2022/132 was adopted in January 2022.

¹ As of 2020, Statistics Estonia does not issue statistical publications.

In the European Union law, regulations governing population, health, labour market, and macroeconomic statistics are also planned to be amended over the coming years.

Census preparations and execution



At the end of 2021, the 10-year preparation stage for this year's population and housing census (henceforth also 'population census') was **completed**. The population census of 2021 was conducted using the combined method. Data was collected from state databases, i.e. registers, and a sample survey was taken. For the first time in Estonia, the entire required body of information all European Union member states compile during a population census under the coordination of Eurostat is obtained from registers. The objective of the survey component of the census is to collect information about the population, which is not available in registers but is necessary for the country.

The main aim of the census is to obtain high-quality data about Estonia. Therefore, during the preparation stage, it has been carefully observed that all results would comply with the United Nations and European Union quality requirements. To organise a registry-based census worthy of a digital society, major work has been done to improve the data quality of registers. The significant tasks included creating a system of databases, adding missing census variables and various archival data into registers, entering relationships between household members into the population register, improving the quality of the state register of construction works, implementing a unified address data system, etc. A world-class system of databases has been established, where there are data on all Estonian residents and dwellings. Based on two pilot censuses, Statistics Estonia has found the quality of the database system to be adequate.

In 2021, the focus was on the automation of data acquisition and improving methodology for the register-based component of the census. The methodology has been developed in cooperation between statisticians and researchers; it has been internationally recognised and set as an example. In organising the population and housing census, Statistics Estonia works with nearly 30 registers.

Statistics Estonia organised a population and housing census test survey to check readiness for the census and gather feedback on the census questions. Nearly 2,000 persons across Estonia participated in the main rehearsal of the population census. A new software application, which is available in other European Union countries as well, will be used to collect data during the population and housing census. Statistics Estonia and software enterprise Helmes started developing a modern data collection system. Final substantive and technical preparations for the survey were carried out from spring to autumn of 2021. In 2020, a logo and graphic identity were created for the census.

From the spring of 2021 to the end of the year, preparations for the media campaign of the census were made. The campaign was carried out in two stages. In the first stage at the end of October, people were encouraged to check and confirm data on themselves and their household members in the population register. In the second stage, which began at the end of December, everyone was invited to participate in the survey. Information on the population census is available on the census website www.rahvaloendus.ee as well as the Facebook and Instagram pages.

In the autumn of 2021, recruitment of temporary additional personnel for conducting the sample survey began. Approximately 160 interviewers along with supervisors, about 20 customer support specialists and 14 data processors were hired. Training sessions for supervisors, interviewers, customer support personnel and data processors were prepared. Trainings took place from the end of December 2021 to mid-January 2022.

Data collection began at the end of 2021 with the two-part sample survey – e-questionnaire was open to everyone from December 28, 2021 to January 22, 2022, and phone interviews were carried out to collect responses from people living at the mandatory sample addresses, who for some reason did not complete the e-questionnaire. Phone interviews were conducted from February 1 to 28. Various registry data will be collected from the beginning of January to July 2022. Data is continually analysed and census results will be published from June to mid-December 2022. Census-related activities will continue all through 2022.

Coordination of data governance

Statistics Estonia coordinates state data governance in cooperation with partners, notably the Republic of Estonia Ministry of Economic Affairs and Communications, and the Information System Authority. In 2021, the worldwide health crisis forced us to change the way we cooperate with institutions. Thus, we created a seminar format. In 11 seminars, institutions presented their data governance activities and solutions.

In the first half-year, we conducted a data governance survey to obtain an overview of organisational activities of controllers and processors of databases registered in the administration system of the state information system (RIHA). 44 authorities (departments of administration, ministries and institutions in their domain) along with their 233 databases participated in the survey. The survey provided Statistics Estonia with a valuable basis for coordinating data governance, which we did not have before. We gained an overview by institutions and databases, on the basis of which to plan further actions.

Another significant activity was participation in the development of the data description tool (RIHAKE) for state agencies. The purpose is to provide agencies with requirements and an application needed to fulfill them. The first version of the application is available since April 2022. Imposition of legal requirements on data governance was continued. In addition to Estonian legislation, we must also take into consideration the pending EU legislation – Data Act and Data Governance Act –, which, among other things, upgrade the concept of data sharing service and promote reuse of data.

In parallel, we started carrying out the reform programme for creating and developing a centre of excellence for data governance and open data. The reform aligns with the national long-term development

strategy “Estonia 2035” and is financed by the Recovery and Resilience Facility of the European Union. As a result of the reform, a centre of competence or excellence will be created at Statistics Estonia. Data governance holds an important position in the Estonian Digital Society Development Plan until 2030. In achieving the two goals of data-based governance and data reuse as defined in the development plan, Statistics Estonia plays a central role. The goals are:

1) decision-making based on first-rate data, which relies on discoverability, quality and speed of use of data to offer analytical support to decision makers and to strengthen processes; and

2) an up-to-date and comprehensive overview of data on the level of registers and datasets. Data can also be semantically linked; once-only principle for data collection is applied and collected data is reused.

The reform programme is planned to be completed in four years.

Development of digital services

In 2021, we continued updating our applications and improving user experience. Therefore we have continued to develop our main website stat.ee and the [Dashboards](#) application, which includes business data, regional statistics, and indicators of development plans. The visual identity of Statistics Estonia was given to the [name statistics application](#) that has proven to be popular with users.

In cooperation with the Commissioner for Equal Opportunities, University of Tartu, Tallinn University of Technology, and the Social Insurance Board, Statistics Estonia upgraded the [wages and salaries application](#), first published in 2020. New occupational groups, comparison of males’ and females’ monthly earnings, and earnings and pension projections were [added](#) to the application. The application was upgraded keeping in mind the principle that ensuring equal opportunities is a social responsibility and a shared goal. Use of reliable data, for instance in salary negotiations, helps to reduce inequality in the whole society. Moreover, greater awareness among employers is an important aspect in the fight against the pay gap. Decisions taken today affect the future, including pensions.

For the 100th anniversary of Statistics Estonia, we launched [StatsFacts](#), a browser extension that marks words and phrases to allow users to obtain statistical and background information on a specific topic. StatsFacts is a tool that helps users to find relevant information on websites, thereby enhancing their data literacy skills.

With regard to the new Government of the Republic assuming office in January 2021, we updated the gauge of the country’s most important indicators, the [Tree of Truth](#), with indicators of the government action programme. We continued developing methodologies for the “Estonia 2035” indicators and adding new indicators to the Tree of Truth. The application covers 183 indicators and the goals set for these in the 2021–2023 government action plan and strategies “Estonia 2035” and “Sustainable Estonia 21”. For the “Estonia 2035” strategy, an entirely new indicator of caring and cooperation was developed together with the Government Office. It can be used to evaluate whether and when the goal of the Estonian society being caring, cooperative and open-minded can be attained. There are also new indicators on accessibility and participation in employment, culture, sports and voluntary work.

Statistical activities outside the programme

In addition to statistical activities in the statistical programme, Statistics Estonia performs activities that are not included in the statistical programme but are ordered by statistics users. Everyone interested in statistics can contact Statistics Estonia. If the statistics requested by the user are not yet produced, they can be ordered. Orders can be placed with regard to all statistical domains. Conditions for contract work have been specified in the service standard published on Statistics Estonia’s [website](#).

In 2021, the revenue from data mining, various surveys, methodological developments and individual indicators ordered from Statistics Estonia was 0.98 million euros (See Table 4). Compared to 2020 (1.4 million), the total value of contract work decreased by 29%. In 2021, we did not continue the project of real-time economy data mining; the cost of it amounted to 550 000 euros in 2020. The largest projects in 2021 were related to execution of surveys, e.g. an international survey of adult competencies and surveys on elderly people. Most of the non-programme activities were smaller orders to get more detailed statistical information than publicly available.

In 2021, Statistics Estonia continued developing indicators for the long-term government strategy “Estonia 2035”. These indicators were developed under commission contracts issued by ministries in 2021, however, we are making efforts to ensure central government funding for national horizontal strategies. In 2021, the interministerial sustainable development working group at the Government Office updated the sustainable development indicators. One of the aims was to harmonize these indicators with those of the “Estonia 2035” strategy. The task of Statistics Estonia was to gather information needed for updating basic data, and to alter or add indicators of the Tree of Truth.

Table 4. Non-programme statistical activities and revenue, in thousands of euros, 2021

Contract work	Revenue
Programme for the International Assessment of Adult Competencies (PIAAC)	414
Survey on Health, Ageing and Retirement in Europe (SHARE)	211
Contract work with hourly pricing	197
Prototype of the gender pay gap web application	36
Collection of fleet-based economic and social indicators	34
Data collection for the ESF	32
Household Finance and Consumption Survey	21
Employment indicators	16
Monitoring of local public services	14
Students from third countries	9
TOTAL	984

Administrative burden of respondents

Two indicators are used in Statistics Estonia to assess the reporting burden: the number of questionnaires per enterprise and time spent on completing and submitting questionnaires. These indicators are calculated per enterprise.

When producing statistics, we mostly use database data and reuse the already collected data. Data are collected from enterprises only if they cannot be obtained from other sources. If possible, we use sample surveys for small enterprises and do not collect data from the whole target group.

Two-thirds of statistical activities used either entirely or partially the data of state databases in 2021. In order to reduce the administrative burden of enterprises, Statistics Estonia actively looks for alternative data sources and possibilities for reducing sample sizes.

Statistical activities affecting the administrative burden of enterprises in 2021

In 2021, 113 questionnaires were used to collect data from enterprises for 53 statistical activities.

Each year, Statistics Estonia stops collecting data with questionnaires in some statistical activities, switching to database data.

In 2021, data were not collected with questionnaires for statistical activities concerning non-profit organisations.

Figure 1. Number of business entities subject to reporting requirements and their proportion among business entities registered in the Business Register



The number of enterprises in questionnaire samples in 2021 decreased significantly compared to 2020 for the statistical activity “Consumption of fuels and energy”, in which the sample size was reduced by a third (sample size in 2020 was 6,500 and 4,438 in 2021). Sample size for the statistical activity “Wages and salaries and labour force” was reduced by approximately 14%. Since the wages and salaries sample is also used for the gender pay gap survey, the same difference applies in both cases. Sample size decreased by

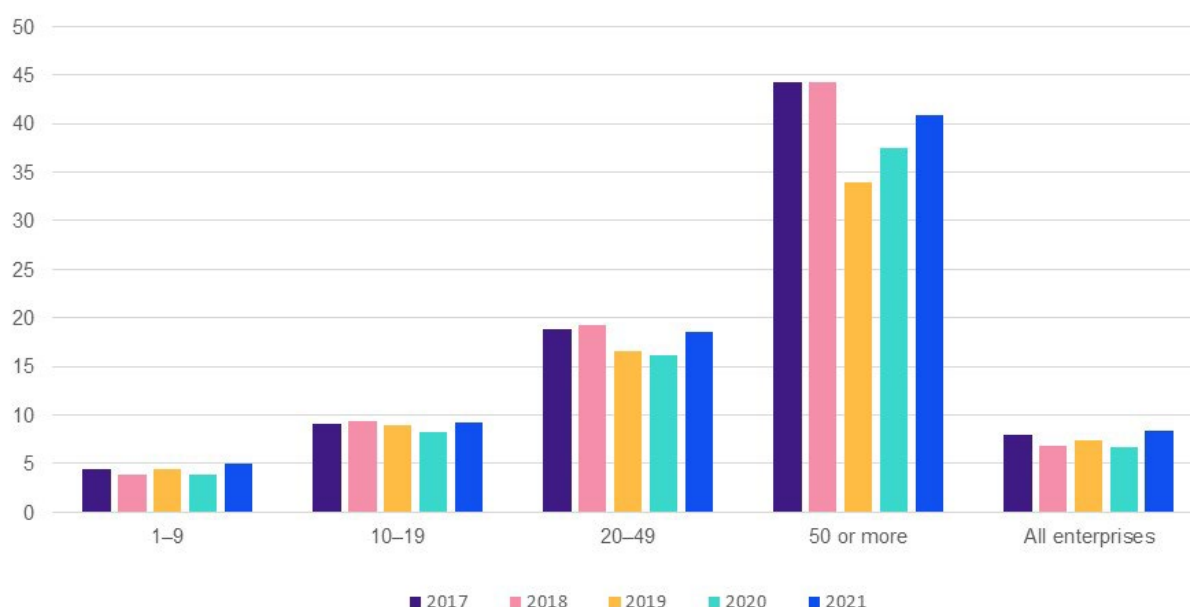
more than 300 enterprises for the statistical activity “Information technology in enterprises” and the structural business survey (EKOMAR); decrease percentage was below 10 (9% and 6%, respectively).

In 2021, sample size increased for the statistical activities “Research and development” (1,608 enterprises were surveyed in 2020 and 1,956 enterprises in 2021; 22% increase) and “Production and trade of energy, consumption of fuels” (from 251 enterprises to 367; 46% increase). For the latter, enterprises specialising in solar panels were added into the sample.

Number of questionnaires per enterprise

In 2021, the average reporting burden of enterprises was 8.3 questionnaires per year, which is slightly smaller than the year before (in 2020, it was 6.7²).

Figure 2. Number of mandatory questionnaires per enterprise by number of employees, 2017–2021



The number of questionnaires per enterprise can be reduced by decreasing sample sizes as well as adopting alternative data sources. These steps affect the administrative burden of enterprises in all size groups.

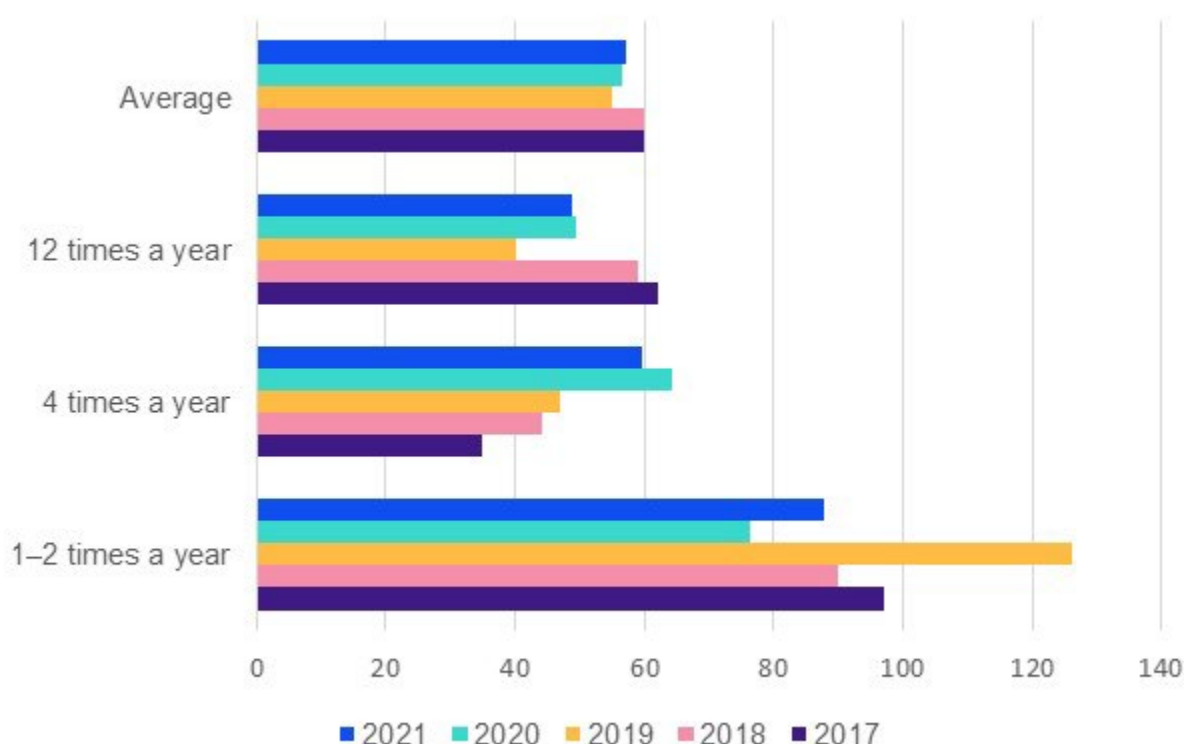
Time spent on questionnaire completion and submission

Statistics Estonia assesses the time spent on questionnaire completion and submission based on the information collected from enterprises. At the end of each questionnaire is a table “Time spent on completing the questionnaire”, where the respondent can indicate the time spent on the completion and submission of the questionnaire in hours and minutes. This information is asked once a year.

In total, Estonian enterprises, institutions and organisations spent 31,626 working days on submitting data to Statistics Estonia in 2021. The average time spent on filling in a questionnaire was 57 minutes. Compared to 2017, average time spent on all questionnaires has decreased 5%.

² The indicator of the 2020 report has been adjusted.

Figure 3. Average time in minutes spent on questionnaire completion and submission by questionnaire completion frequency, 2017–2021



Reducing the administrative burden of enterprises

To reduce administrative burden, we will continue to do the following:

- develop the solution to enable automatic submission of data on wages and salaries and labour force (the Reporting 3.0 project);
- upgrade our data collection service, incl. electronic data submission environment;
- look for information in databases, in public and private sector information systems, and on websites, with the aim of reusing the existing data and reducing data collection with questionnaires;
- apply once-only principle for data collection;
- make maximum use of data collected from enterprises with questionnaires when performing other statistical activities;
- use a model-based estimation to obtain missing information and thereby decrease sample sizes and/or frequency of data collection;
- make questionnaires easier to understand and to complete for data providers.

Customers' satisfaction with official statistics

Two customer segments – data providers and users of statistics – are asked for feedback about satisfaction. Data providers are enterprises, public sector organisations and private persons who submit data to Statistics Estonia by answering questionnaires. Users of statistics are enterprises or private persons who have submitted a request for information or ordered data as contract work from Statistics Estonia.

To determine the level of satisfaction, we use the promoter index methodology (NPS – Net Promoter Score). Assessments on a scale of 1 to 10 are given to three questions. The result of the promoter index may range from –100 to 100. “Excellent” ranges from 100 to 60, “very good” from 59 to 20, “good” from 19 to 0, “satisfactory” from –1 to –40, “poor” from –41 to –70 and “very poor” from –71 to –100.

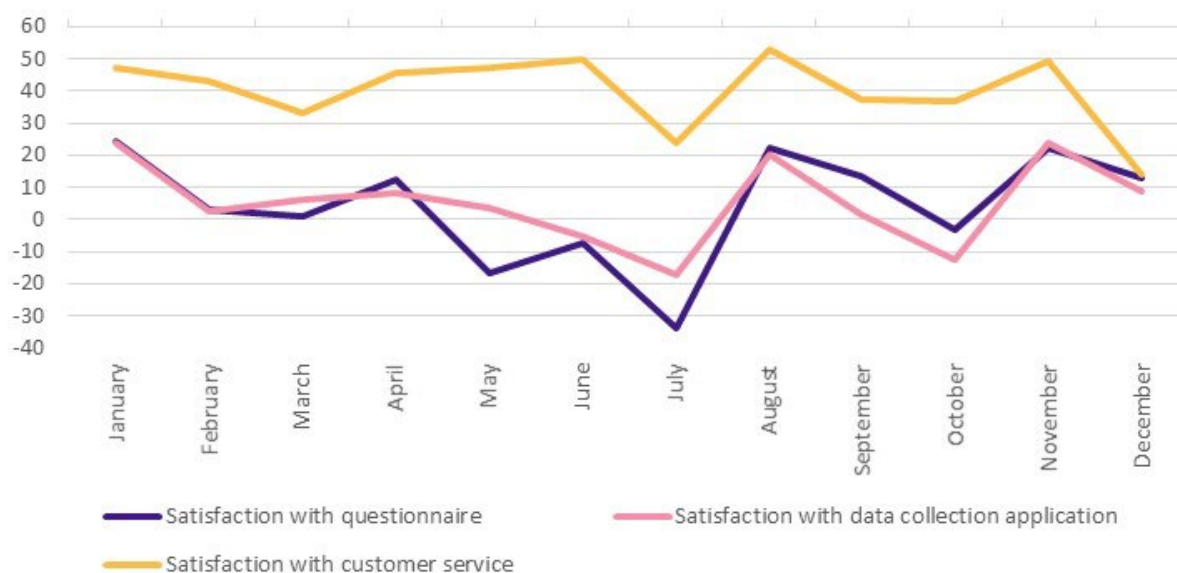
In 2021, Statistics Estonia asked more than 20,000 data providers for feedback and suggestions on eSTAT, questionnaires and customer service. The following questions were asked: “In your opinion, how easy was it to fill in the questionnaire?”, “In your opinion, how easy was it to use eSTAT?”, “If you contacted customer support, were you satisfied?”

We received approximately 2,000 answers (response rate 14.4%) on 96 questionnaires. The general promoter index for eSTAT rose considerably. Whereas in 2020 the eSTAT promoter index was 4, in 2021, it was 9.3, which is a good result. The promoter index for questionnaires was 8.6 and the customer service index was 42.1.

According to data providers, the positive aspects of submitting data are that questionnaires have been pre-filled, it is easy to upload and edit reports and the questionnaire structure is stable. Customer service performance is evaluated highly by respondents, who highlight constructive assistance, competence and good cooperation.

The dissatisfaction of data providers is caused by the high administrative burden. They suggest combining questionnaires on the same topic. Users consider the design of the data collection application eSTAT cumbersome. Navigation in the application is difficult and the overview of a questionnaire in progress is lacking.

Figure 4. Data providers' assessment of Statistics Estonia's activities, 2021



In 2021, Statistics Estonia asked 1,281 users of statistics for feedback and suggestions about requests for information, completed contract work and customer service. The customers were invited to respond to the following questions: "How satisfied are you with the response / to what degree did the result of the contract work meet your needs?"; "How satisfied are you with customer service?"; "How likely is it that you would recommend Statistics Estonia to a colleague or friend?".

We received 255 answers (response rate 20%). In 2021, Statistics Estonia's promoter index was 72.2 (in 2020, it was 73). The index for satisfaction with responses to requests for information or orders was 66.3 and the customer service satisfaction index was 78.4.

The users of statistics point out quick, convenient and professional customer service. As for responses, the customers are satisfied with the cooperation to identify their needs, with the level of detail, and meeting the customer's requests. The users are not satisfied if the data they are looking for is not published. It was also noted that finding the necessary data on the website of Statistics Estonia and in the statistical database is relatively complicated and could be simplified.

Statistics Estonia participates in the survey on the reliability of institutions conducted by the market research enterprise Turu-uuringute AS. Once a quarter, 1,000 randomly sampled persons in Estonia are asked the question "In your opinion, how reliable are the following institutions?". Every quarter, the survey covers 26 or 27 institutions. In 2021, Statistics Estonia's highest rank in the reliability survey was 11th, and 15th rank was attained in the 4th quarter. The Rescue Board, the Emergency Response Centre and the Police and Border Guard Board are considered the most reliable institutions. With slight fluctuations, the same institutions have ranked at the top for years.