

# 2017

## ANNUAL REPORT

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## DEAR READER!

The year 2017 was successful for Statistics Estonia. Most important was the successful chairing of the Council Working Party on Statistics during the Estonian Presidency of the Council of the European Union, the impact of which went beyond Statistics Estonia's previous work. We showed that although a small country, Estonia is equally capable of leading and organising joint discussions and making decisions which consider and affect the entire European society.

Another important achievement was the good progress made in preparing for the register-based population and housing census, for which, as stage one, an application has been developed for collecting machine-readable data from enterprises. The most important tasks in organising the register-based population and housing census were increasing the capacity for data capture and consultations on improving the quality of register data. On the basis of capturing machine-readable data ("Reporting 3.0"), the first taxonomy of labour costs in cooperation with the Estonian Tax and Customs Board and Eesti Pank was prepared. With this project, the capacity to receive data from enterprises automatically via API instead of via questionnaires was established in Statistics Estonia.

In 2017, new developments received recognition from users. A new database of web-based outputs developed by the OECD was implemented, enabling users to submit queries about indicators provided by Statistics Estonia also via API. The possibility to use online chat on Statistics Estonia's website has been received very well. Clients had been waiting for this opportunity for a long time, as finding necessary information from all of Statistics Estonia's data is often complicated, especially if data are not sought on a daily basis.

I would like to thank the users of Statistics Estonia's data who have over the course of the year actively monitored and used the information provided by Statistics Estonia to make informed decisions. Excellent feedback to the work of Statistics Estonia will no doubt help make us even more user-friendly and efficient. I would like to compliment the employees of Statistics Estonia, whose daily dedicated work guarantees reliable and quality indicators describing the phenomena of the society.

Mart Mägi

Director General of Statistics Estonia

## MAIN EVENTS IN 2017

In March, the Estonian team placed third after Croatia and France in the European Big Data Hackathon in Brussels, organised by the European Commission and the statistical office of the European Union, Eurostat.

In March, the Eurostat's GNI (gross national income) information visit took place. The purpose of the visit was to discuss the description of the sources and methodologies of GNI calculations revised after the introduction of ESA2010, to check construction sector calculations and discuss subsequent action points related to methodological improvements and use of new information in GNI calculations and descriptions.

In April, Mart Mägi became Director General of Statistics Estonia.

In April, Statistics Estonia in cooperation with Eurostat organised a European statistics users' conference "Small Estonia, big Europe – what do statistics show?" in Tallinn.

From July to December, Statistics Estonia successfully chaired the Council Working Party on Statistics during the Estonian Presidency of the Council of the European Union.

In July, Statistics Estonia participated in the Opinion Festival with a discussion "Paremad otsused = vähem privaatsust?" ("Better decisions = less privacy?") (See Quarterly Bulletin of Statistics Estonia 4/2017).

In September, Statistics Estonia was awarded a Family-Friendly Employer label.

In September, Eurostat carried out an EDP (Excessive Deficit Procedure) dialogue visit. The purpose of the visit was to review institutional responsibilities in the field of government finance statistics including EDP reporting and data sources for the EDP data compilation. In addition, Eurostat reviewed the implementation of the ESA2010 methodology, in particular for the delimitation of general government as well as in the recording of specific government transactions and the application of the accrual principle.

In November, the new statistical database software .Stat was introduced.

Statistics Estonia reduced the administrative burden of enterprises and institutions within the framework of project "Reporting 3.0".

The best in 2017 were chosen:

- Colleague of the year – Eha Pajor;
- Newcomer of the year – Karin Veski and Andres Kukke;
- Innovation of the year, added value for clients: introduction of online chat – Birgit Hansson, Olga Albrecht, Sille Tiitsmaa, Aime Lauk and Raivo Rohtla;
- Innovation of the year, internal efficiency: reduction in data burden, merging of wages and salaries and labour turnover questionnaires – Kai Maasoo;
- Team of the year: Presidency team – Tuulik Sillajõe, Aivi Saar, Kairi Kübarsepp, Meelis Somelar, Remi Prual, Heidy Roosimägi, Karl Viilmann, Kutt Kommel, Kaja Sõstra, Reet Romanov, Eve Valdvee, Greta Tischler, Merike Põldsaar, Iljen Dedegkajeva;
- Cooperation partner of the year – Elering;
- Cooperation project of the year: third place in the European Big Data Hackathon – Innar Liiv, Rain Öpik, Toomas Kirt.

## FULFILMENT OF THE 2017 STATISTICAL PROGRAMME

The main task of Statistics Estonia is to provide reliable and objective information about the environmental, demographic, social and economic situation and trends in Estonia. This information – official statistics – is produced by Statistics Estonia based on the needs of statistics users. Statistics are essential input for Estonian ministries, the European Union's (EU) institutions, research institutions, enterprises, business associations, etc. The official statistics of Estonia are available to everyone (usually through various media) in Estonia and abroad. Generally, Estonian users need more detailed statistics than organisations of other countries and international organisations.

There are two producers of official statistics in Estonia – Statistics Estonia and Eesti Pank (the central bank of Estonia). In order to produce statistics, Statistics Estonia performs statistical activities, which are submitted as a list of statistical activities to the Government of the Republic for approval. The list of statistical activities of Eesti Pank is approved by the Governor of Eesti Pank. The statistical programme comprises the statistical activities of Statistics Estonia and Eesti Pank.

The statistical programme is prepared every year for the following five years. The programme includes statistical activities from the population, social, economic and environmental domains and is prepared based on national or international statistical needs. Statistics Estonia's statistical activities divide into six types: main statistics, cyclical statistics, non-regular statistics, development activities, statistical analysis and statistical registers. The programme also includes activities funded by the Structural Funds and the European Commission with grants.

The statistical programme is based on the needs of users. User needs are taken into account in the course of the preparation of the statistical programme by the representatives of public interest, who are mostly ministries. Representatives of public interest ensure that there are quality official statistics in their field, which are necessary for promoting life in Estonia and for making national decisions. From the representatives of public interest, the Ministry of Economic Affairs and Communications, the Ministry of Finance and the Ministry of Social Affairs are the most active users of official statistics. The producers of official statistics also fulfil orders for information outside the programme (See Statistical activities not included in the programme on p 9).

### Fulfilment of the 2017 statistical programme

In the statistical programme for 2017–2021 there were 150 statistical activities listed for 2017, the total cost of which was 6.3 million euros<sup>a</sup>. The largest activity – totalling 0.8 million euros – consisted in preparations for the Register-Based Population and Housing Census (REGREL) 2021. In 2017, there were 129 annual statistical activities classified under main statistics, 8 cyclical statistical activities, 5 non-regular statistical activities, 2 development activities, 4 statistical analysis activities and 2 statistical registers.

Fulfilment of the 2017 statistical programme was successful – all the planned activities were completed. There were a total of 950 releases (806 statistical database objects, 137 news releases, 7 publications). The produced statistics are made available to users first in the statistical database and then in other products. Users are informed about produced statistics via the release calendar. In 2017, the number of deviations from the release calendar decreased slightly – in total there were 22 deviations (19 statistical database objects and 3 publications), which constitutes 2.3% of the total number of releases. The reason for the majority of deviations was the delayed receipt of data and extended period of data processing.

#### Deviations from the release calendar, 2011–2017

Year	Statistical database	News releases	Statistical publications	Total	Share in total number of releases, %
2011	6	0	0	6	0.5
2012	8	2	0	10	0.9
2013	11	4	0	15	1.5
2014	32	2	1	35	3.6
2015	18	2	1	21	2.1
2016	22	1	2	25	2.5
2017	19	0	3	22	2.3

### Preparations for REGREL in 2017

Preparations for REGREL took place as planned.

The main objective of the year was to supplement the register-based census methodology and to align it with international experience. Methodologists in the REGREL team acquainted themselves with the experience of the Netherlands, Iceland and Norway in carrying out a register-based census and identified possibilities for developing the census methodology. A priority issue was finding solutions for improving the register-based census methodology as regards the formation of households. In this regard, new data sources were examined to identify the so-called signs of life and partnership and test and produce partnership and placement indices. The methodology needs to be further developed and tested. The objective is to create a model which would enable to match actual partners and determine whether they form a household (and family) or not.

<sup>a</sup> The total costs in 2017 amounted to 9.4 million euros. The cost of the list of statistical activities does not include rent paid to Riigi Kinnisvara AS (million euros), statistical activities not included in the programme and externally funded projects (1.5 million euros) and investments (0.6 million euros).

Methodological work continued in specifying the parameters of the residency index. A new index-based methodology was introduced, which enables to check each year on the basis of Estonian registers, how many people live in Estonia and how many have left. The index-based methodology allowed to specify the volume of immigration and emigration as well as estimate the number of transnational (living for a part of time in another country and moving between countries) Estonians.

Activities related to state registers were mostly the assessment of data quality and ensuring data transmission via the X-Road. The quality of a register-based census depends on the quality of data in registers, and, therefore, general quality requirements were imposed on those maintaining state registers, which they need to follow so that Statistics Estonia would be able to form census characteristics.

Overall, the quality of census data is reduced the most by the difference between the registered and actual place of residence data. This fact has a significant impact on the structure of households and families. Also the quality of data in the construction register (State Register of Construction Works) is not good enough. Low quality of the register includes undercoverage of both buildings and dwellings, incomplete information on technical characteristics and missing updates. Classifications of 90% of databases have been organised, but the main problem is updating the management of classifications and linking with the most recent version. Due to this, the most recent version of the Classification of Estonian administrative units and settlements (EHAK) is not used in many databases or classifications have not been implemented.

A new and substantial task was organising the international classification ISCO 2008 for data harvesting in 2018. The classification required organising because data about all employed persons shall have to be collected into the employment register (TÖR). The following characteristics shall be collected:

- official title of the employee;
- address of the employee's workplace.

Use of the classification is necessary for correct interpretation of database data and ensuring data accuracy. In addition, development activities related to supplementing the employment register of the Tax and Customs Board were commenced to ensure preparedness for collecting data on official titles and workplace addresses in 2018.

IT development activities in databases and in Statistics Estonia were continued to create conditions for a register-based census: implementation of the address data system in databases, building the capacity for automatic data capture, ensuring the existence of datasets in registers corresponding to census characteristics, etc.

As regards data organisation on municipality level, it must be stated that municipalities were to a large extent not able to organise the necessary dataset of addresses due to the large volume of data or not considering ensuring data quality important enough. On 30.11.2017, the Minister of Public Administration sent a memorandum to municipalities on the importance of organising data in preparation for the census.

A big contribution was made to international cooperation, including the participation of Statistics Estonia in UNECE (United Nations Economic Commission for Europe) task forces on censuses in preparation for the next census round in the world. In May, the 20th regular consultations of the Baltic States on population and housing censuses took place. The main objective of the meeting was to share the experience of the countries in the region to solve problems that occurred during preparing for a register-based census.

## New statistical activities performed in 2017

In 2017, seven new statistical activities were added to the statistical programme.

Three statistical activities arising from EU legislation, which were included in the supplementary budget request, were added into the environmental domain, the performing of which was possible after the production of nationally commissioned output indicators in other domains was stopped. The main representative of public interest of these activities is the Ministry of the Environment.

- The aim of the statistical activity "Environmental protection goods and services sector accounts" (10106) is to publish the volume of environmental protection related services and goods (incl. exports), value added and employment; to analyse the areas of development of the sector producing environmental protection services and goods and the information about the parameters of the environment-related sector comparable with economic statistics (based on Regulation (EU) No 691/2011). Results are published since 2017.
- The statistical activity "Environmental protection expenditure accounts, macro level" (10107) enables to make integrated analyses and identify the share of environment-related activities in the value added of the total economy, consumption and gross fixed capital formation (based on Regulation (EU) No 538/2014). Results are published since 2017.
- The aim of the statistical activity "Energy accounts" (10105) is to develop energy accounts (based on Regulation (EU) No 691/2011) needed for linking data on energy use with economic indicators. The activity is necessary also as input for air emissions accounts and linking air emissions related to energy production with the system of national accounts and the national inventory of greenhouse gas emissions. Results are published since 2017.

In the social domain, there are three new statistical activities:

- Labour Force Survey module “Entrepreneurs and sole proprietors” (40713), which is the first comprehensive survey of European entrepreneurs and sole proprietors. The module has three major themes: economic independence of entrepreneurs and sole proprietors, work conditions of entrepreneurs and sole proprietors and comparison of employees, entrepreneurs and sole proprietors (incl. work satisfaction). Based on the survey results, it is possible to describe the situation of Estonian entrepreneurs, the main difficulties the entrepreneurs face in Estonia and the main reasons for setting up a business. From the perspective of strategic planning, the survey results are useful for both the Ministry of Economic Affairs and Communications and the Ministry of Finance, but also to the Ministry of Education and Research, Ministry of Rural Affairs, Estonian Chamber of Commerce and Industry and other organisations that deal with job creation and business development. Data are collected and results are published in 2017–2018. The activity is based on Regulation (EU) No 318/2013.
- In all the Member States, the 2018 Labour Force Survey includes an additional module “Reconciliation of work and family life” (40714), preparatory work for which was commenced in 2017. A flexible reconciliation of work and family life is one of the quality indicators of working life and is connected to an EU employment programme which provides for increase in the employment of women and promotion of gender equality. The aim of the module is to provide information about the possibilities of reconciling work and family life in different population groups, including information about the flexibility of working time and working conditions, childcare and possibilities for caring for close persons, etc. Data are collected and results are published in 2018–2019. The main representative of public interest of the statistical activity is the Ministry of Social Affairs. The activity is based on Regulation (EU) No 220/2010.
- With the module “Health” (40615) of the Social Survey, the health status and health-related behaviour of the population, use of health services and healthcare resources and their use are examined. With questions in the module, expenditure on health care, dental care and pharmaceuticals are measured. The health statistics produced on the basis of the data collected with the module have important common elements with social cohesion, residents’ life expectancy, social protection, occupational health care and other important subject area statistics. In the preparatory phase of data collection, Statistics Estonia cooperates with the Ministry of Social Affairs, National Institute for Health Development, Office of the Chancellor of Justice and other state authorities who shall later use and analyse the results of the module and develop policies in the particular domain. The activity is based on Regulation (EC) No 1177/2003.
- The statistical activity “Thematic collection” (50019) shall include from 2017 publications compiled on different domains and published in different years, which provide users with analytical overviews. In 2017, within the framework of the statistical activity, the publication “Economic and Labour Market Trends” appeared, the aim of which was to give users an overview of the main changes in the labour market and economy. Both labour market and economic trends were observed as well as their differences depending on socio-demographic groups.

## Statistical activities left out from the 2017 list of statistical activities

The statistical activity “Social Trends” (40002) shall be stopped and the planned publication shall appear in 2019 within the framework of the statistical activity “Thematic collection”.

The frequency of the statistical activity “Use of pesticides” (10502) was changed from annual main statistics to cyclical statistics. The length of the cycle is related to the EU regulation according to which data must be transmitted once every five years, and, therefore, the statistical activity is not planned for 2017–2021. The resources that became available are used for performing statistical activities in the environmental domain, arising from EU legislation.

The statistical activity “Health care” (40604) was left out in agreement with the Ministry of Social Affairs because data are also published by the National Institute for Health Development.

Also, in agreement with the Ministry of Justice, the statistical activity “Legal system” (40801) was left out, as data are published by the Ministry of Justice and the Supreme Court.

In the statistical activity “Crime” (40802), the share of national statistics was reduced, as the data are published by the Ministry of Justice. The resources that became available are used for performing statistical activities in the environmental domain, arising from EU legislation.

In the case of nine statistical activities, the share of national statistics was reduced in agreement with the Ministry of Economic Affairs and Communications, as the data are published by institutions in the area of the ministry’s government:

- “Communications” (20507),
- “Communication services” (20508),
- “Transactions in real estate” (20803),
- “Border crossings registered at border checkpoints” (22102),
- “Traffic accidents” (22025),
- “Transport infrastructure” (22026),
- “Registered motor vehicles” (22027),
- “Transport of passengers and goods by transport enterprises” (22029),
- “Air transport” (22032).



The resources that became available are used for performing statistical activities in the environmental domain, arising from EU legislation.

The statistical activity "Statistical Yearbook of Estonia" was stopped and a part of the resources that became available are used for performing the statistical activity "Thematic collection", within the framework of which, the volume of publications, articles and blog posts shall be increased.

Other statistical activities that were stopped are "Portal of regional statistics" (50102), publications "Estonia. Numbers and facts" (50005) and "Sustainable development indicators"<sup>a</sup> (50203). The resources that became available are used for performing statistical activities in the environmental domain, arising from EU legislation.

Due to budget restrictions, five statistical actions with a total cost of 559,100 euros were left out from the list of statistical activities for 2017.

#### Statistical activities left out from the list of statistical activities due to budget restrictions, 2017

Name	Type	Domain	Main representative of public interest	Cost, euros
Development of the service producer price index <sup>b</sup> (20413)	Main statistics	Economy	Ministry of Economic Affairs and Communications	23,000
Better access to differences in wages/salaries (21109)	Main statistics	Economy	Ministry of Social Affairs	25,000
Introduction of new data sources (20008)	Development	Economy	Ministry of Finance	97,000
Restoration of time series (50017)	Development	Other areas	Ministry of Finance	66,000
Survey on Health, Ageing and Retirement in Europe (40021)	Cyclical statistics	Social life	Ministry of Social Affairs	348,100
<b>Total</b>				<b>559,100</b>

<sup>b</sup> Mandatory activity arising from EU legislation.

The aim of the statistical activity "Development of the service producer price index" (20413) is to develop economic indicators that would provide information about the changes in the business services consumer price over time. The share of services in the GDP is nearly 70%, having grown at the expense of manufacturing activities year after year. Therefore, it would be very important to know the changes in service prices, to use these to compare the change in the volume of services provided and monitor the development of the Estonian economy. The Regulation (EC) No 1158/2005 provides the calculation of 20 indexes for business service activity areas. As of December 2017, there are 15 indexes in production and 4 in development.

With the statistical activity "Better access to differences in wages/salaries" (21109), statistics on the difference in the wages/salaries of men and women are produced. Until 2016, the activity was financed from the Norwegian Financial Mechanism programme<sup>c</sup> "Gender equality and work-life balance". One of the prerequisites for funding was sustainability of the work, i.e. ensuring the collection of data on gender pay gap, consistency in publishing and timeliness, and continuing with the follow-up activities (incl. methodology development) after the end of the project. Statistics Estonia shall continue to calculate gender equality indicators and develop the methodology if funding is provided (for this, a request for additional funding of the statistical activity from the state budget shall be submitted). If objectives are not met, a claim for repayment in the framework of the pre-defined project "Better access to differences in wages/salaries" of the Norwegian Financial Mechanism programme is possible. The main representative of public interest is the Ministry of Social Affairs.

The statistical activity "Introduction of new data sources" (20008) enables to fulfil the users' need for increasingly detailed statistics (smaller regions, larger number of phenomena, etc.) and reduce the burden of respondents. During the development of the statistical activity, the suitability of administrative data for producing more detailed statistics by the field of activity of economic entity, size group and administrative division is assessed. On the basis of the results of the analysis, a methodology for the production of sectoral statistics (incl. regional level) is developed and information systems for the production of the respective statistics are supplemented. The main representative of public interest in the Ministry of Finance.

With the statistical activity "Restoration of time series", older data important for Estonia could be made available to the user. The aim of the activity is to collect statistics that has previously been published only in print, to check and digitise the data and compare definitions. The activity is important for describing the long-term development of Estonian healthcare, education, social insurance, population, economy and other fields. The restored time series could be published in the statistical database and would be available to everyone. The main representative of public interest is the Ministry of Finance.

The statistical activity "Survey on Health, Ageing and Retirement in Europe" (40021) is a SHARE longitudinal survey with permanent respondents, with which data in Europe are collected about the ageing, health and retiring from the labour market of persons aged 50 or older. For the European Commission, SHARE is the most important source for assessing the situation in the field of social protection and social inclusion in the Member States and for making relevant decisions. Estonia has participated in the SHARE survey since 2010, i.e. from the fourth survey wave. In Estonia, there have been three survey waves; interviews of the first and third wave were conducted by Statistics Estonia. So far, SHARE has been financed on a project basis and mainly from external funding – initially with the support of a European Commission grant and afterwards by the Ministry of Education and Research with funding from the Structural Funds. Co-financing for both external funds has been mainly provided by the Ministry of Social Affairs, Ministry of Education and Research and Tallinn University Institute for

<sup>a</sup> The statistical activity was performed every other year.

<sup>c</sup> Agreement between the European Union, Iceland, Liechtenstein and Norway on the European Economic Area Financial Mechanism 2009–2014.



Population Studies. No funding has been allocated for conducting the next SHARE survey wave in 2017–2019. Discontinuation of the current work decreases considerably the benefit of the investment already made and disrupts the main value of the database – the time series, making it impossible to observe on the basis of these data the trends of the future in Estonia with ageing population. Statistics Estonia has the experience of conducting the first and third SHARE survey waves in Estonia and only the interviewers' network of Statistics Estonia has the knowledge necessary for carrying out retrospective surveys, which is exactly what is required for the seventh survey wave planned for the period of 2017–2019. In the case of SHARE-type surveys, also the consistency of interviewers is important, which significantly increases the response rate (international minimum response rate is 83%). Statistics Estonia can add SHARE into the list of statistical activities only if regular instead of project-based funding is provided. The main representative of public interest is the Ministry of Social Affairs.

### Statistical activities not included in the programme

In addition to statistical activities in the statistical programme, Statistics Estonia also performs activities that are not included in the statistical programme but are ordered by statistics users. Everyone interested in statistics can address Statistics Estonia to get access to statistics. 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 orders for information are specified in the service standard published on the website of Statistics Estonia.

In 2017, Statistics Estonia fulfilled more than 470 non-programme orders placed by enterprises, institutions and private persons, which is 11% more than in 2016. Last year, the revenue from orders was 679,300 euros – twice as much as in 2016.

Most of the statistical activities not included in the programme were small-scale orders for statistical information more detailed than the already published statistics. The volume of standardised orders in 2017 decreased somewhat. These are orders that can be placed for commodity groups or companies based on specific characteristics (e.g. foreign trade statistics, data on economic entities). To facilitate orders for statistics, Statistics Estonia has a separate price list for standardised orders for information. 13% of all orders concerned foreign trade statistics, which are ordered mostly by industrial enterprises in Estonia and neighbouring countries. From the end of 2017, more detailed foreign trade statistics are available in the new statistical database, which is why the number of orders for foreign trade statistics has decreased. The share of orders for financial key ratios was 7%. The number of orders fulfilled based on hourly work increased compared to 2016 and the number of preparations of microdata for research purposes remained at the level of the previous year. Compared to 2016, the number of orders for publications increased slightly, accounting for 31% of the total number of orders.

### Non-programme orders fulfilled by Statistics Estonia and incurred income, 2016–2017

	Total, euros		Number	
	2016	2017	2016	2017
Household Finance and Consumption Survey	11,700	216,830	1	1
Survey on Health, Ageing and Retirement in Europe (SHARE)	66,110	202,800	1	1
Foreign Visitors Survey	83,500	91,900	1	1
European Social Survey (ESS)	39,300	54,000	1	1
Orders for information based on hourly work	11,850	30,200	135	208
Using microdata collected for statistical purposes for research	12,700	5,600	26	17
Data harvesting from participants of the European Social Fund activities in Statistics Estonia 2014–2025	37,400	28,300	1	1
Youth data reusing project	2,300	16,700	1	1
Establishment of integrated microdata database for monitoring integration and publication of indicators	5,000	5,000	1	1
Overview of Southern Estonia in the quarterly bulletin	–	3,000	–	1
Organising statistical training	5,000	2,700	1	2
Brochure "Business opportunities in Eastern Estonia"	2,200	1,400	1	1
Publication "Viljandi vald – positiivne. Strateegia, ettevõtte, statistika" ("Viljandi parish – positive. Strategy, enterprises, statistics")	10,600	–	1	–
Ex post evaluation of the rural development plan	1,000	–	1	–
<b>Standardised orders for information</b>				
Minifacts about Estonia 2017		8,500		60
Orders for publications	9,300	4,600	136	89
Orders for foreign trade statistics	9,000	7,400	77	62
Financial key ratios	560	400	42	31
<b>TOTAL</b>	<b>307,520<sup>a</sup></b>	<b>679,330</b>	<b>427</b>	<b>478</b>

<sup>a</sup> Accrued cost

## Description of larger statistical activities not included in the programme

### Household Finance and Consumption Survey

The Household Finance and Consumption Survey (HFCS) is conducted in cooperation with Eesti Pank. The aim of the survey is to collect information about the assets, liabilities, income and expenses of households. The collected data are used by Eesti Pank for carrying out economic surveys and economic policy analysis, e.g. for assessing the impact of the monetary policy or financial stability and tax systems analysis. The data can also be used by researchers outside central banks. Similar surveys are conducted by all the central banks in the eurozone, coordinated by the European Central Bank. The survey has mostly permanent respondents, which means that the same households are interviewed every three years. In order to renew the sample and secure the required number of respondents, new respondents are invited to join the sample each survey year. The survey has been conducted twice in Estonia: in 2013 and 2017. In 2013, the number of households interviewed was 2,220, and in 2017, the number stood at 2,679. In 2018–2019, mass processing of survey data is carried out in cooperation with Eesti Pank and the European Central Bank. Data of the 2017 survey are published in 2020. In the same year, the third survey wave in Estonia shall be conducted. An overview of the results of the 2013 Household Finance and Consumption Survey is published on the website of Eesti Pank.

### Survey on Health, Ageing and Retirement in Europe (SHARE)

SHARE is a pan-European longitudinal study involving the elderly population (aged 50 and older). SHARE results have helped to observe the demographic changes in Europe since 2004. The survey is described in more detail above (pp 8–9).

### Foreign Visitors Survey

The Foreign Visitors Survey was carried out from 2014–2017. The aim of the survey was to determine the expenditure incurred by foreign visitors in Estonia, their travel motivation and behaviour and satisfaction. The survey was commissioned by Enterprise Estonia who uses the information for business development in the tourism sector. The data obtained from the survey is important also for Eesti Pank for the calculation of Estonia's revenue from tourism and presenting it in the Estonian balance of payments. In addition to Enterprise Estonia and the tourism sector, the collected data are necessary for the Ministry of Economic Affairs and Communications and municipalities. Data by type of expenditure are necessary for assessing the impact of tourism on the Estonian economy in a wider sense (direct impact on sectors benefiting from tourism, such as accommodation and travel agents, and indirect impact on the providers of other goods and services). For the purposes of the survey, the tourists leaving Estonia were surveyed at the border crossing points and outside border crossing points twice a year. In 2017, summer interviews were conducted from mid-July to mid-August and winter interviews from the beginning of November to mid-December. Reports on survey results for 2014–2016 have been published on the website of Statistics Estonia. An article presenting the results of the 2017 survey will appear in the third issue of the 2018 Quarterly Bulletin of Statistics Estonia. The Foreign Visitors Survey shall not be conducted in 2018.

### European Social Survey

European Social Survey (ESS) is an international social survey and a social sciences infrastructure, the objective of which is to enable the study of social development patterns. The state coordinator of the project is the University of Tartu, who ordered the ESS eighth wave data collection from Statistics Estonia in 2016. The survey was conducted from spring 2016 until spring 2017; data was collected from September 2016 until January 2017. Participants of the survey were asked questions about their lives and their attitudes were investigated with various statements. The survey has been conducted since 2002. Survey results of previous years are available on the survey website (See the website of the University of Tartu). In 2017, data were cleaned and coded. In 2018, the ninth wave data collection has been planned to be carried out, which should take place from October 2018 until the end of January 2019.

### Data harvesting from participants of the European Social Fund activities in Statistics Estonia 2014–2025

The aim of the statistical activity is to assess the success of the use of the funding provided by the European Social Fund (ESF). For this, the improvement of the labour market position of the participants in activities is assessed four weeks and six months after the end of the activities in comparison with the initial position. Implementing entities submit to Statistics Estonia the agreed input data on the participants in activities, to which Statistics Estonia adds data received from databases (the employment register, population register, Töötukassa (Estonian Unemployment Insurance Fund), etc.). Statistics Estonia also conducts a monthly online survey to assess the improvement of the labour market position of employed persons. Based on the input data, the participants' labour market position is established at three points in time (at the beginning of the activity, four weeks and six months after the end of the activity) and internationally established indicators on the improvement of the labour market position are calculated. For example, the number of persons who were unemployed at the beginning of the activity but have started work after the activity; the number of persons having obtained professional qualifications. Statistics Estonia compiles a report on the results to the European Commission and the state. The activity is commissioned by the Ministry of Finance.

### Youth data reusing project

The aim of the project commissioned by the Estonian Youth Work Centre is to increase knowledge about the Estonian youth in order to offer young people better services mainly via youth policy and youth work. The project lasts more than two years (November 2016 – December 2018) and has four stages. During the first stage, it was established, what kind of data are collected on the youth (7–26-year-olds) in state databases, large social surveys and other available quality data sources. The

overview is available on the Youth Monitor website. During the second stage in 2017, a survey reusing the already collected data was organised and conducted. During the third stage, a product shall be created on the website of Statistics Estonia enabling the user (mainly someone who provides/organises youth services) to search and visualise youth data and links between data. During the final stage of the project, positions shall be formulated on the basis of the work completed and development proposals shall be prepared in three fields: activities of the state in collecting youth data, supporting the strategic management of the youth field and systematic development of youth monitoring.

### **Establishment of integrated microdata database for monitoring integration and publication of indicators**

The aim of integration indicators is to determine whether people living in Estonia with different ethnic, cultural and linguistic background and origin have equal opportunities for successful coping and well-being. These indicators could also help measure integration in Estonia. Integration indicators reflect the attainment of education, participation in employment, socio-economic performance and living conditions of groups of people with different domestic languages, nationality and origin.

The activity was commissioned by the Ministry of Culture. Statistics Estonia identified its existing integration-related surveys and databases and analysed their usability for the production of integration statistics. For the production of integration indicators, data from different sources were linked and additional variables were calculated. Integration indicators have been published in the statistical database. The existing time series are planned to be continued in cooperation with the Ministry of Culture, supplementing them with data for the coming years and adding necessary subsections if possible.

### **Overview of Southern Estonia in the quarterly bulletin**

A collection of articles on the counties of Southern Estonia was compiled in cooperation with Tartu Business Advisory Services Foundation, which was published in the third issue of the 2017 Quarterly Bulletin of Statistics Estonia. The collection provides a thorough overview of the demographic situation, labour market, education, economy and quality of life in Southern Estonia. The administrative reform (an overview of the reform and first conclusions) was examined separately. The collection was commissioned by the Tartu Business Advisory Services Foundation and was published in October 2017. The publication is available on the website of Statistics Estonia.

### **Brochure “Business opportunities in Eastern Estonia”**

The aim of the English-language publication is to introduce the region of Eastern Estonia (Ida-Viru, Lääne-Viru, Jõgeva and Järva counties) via statistics, figures, maps and photos. The brochure provides an overview of the economy, labour market, tourism, business and investment opportunities of Eastern Estonia. The brochure was compiled at the request of Foundation Lääne-Viru Development Centre and was published in May 2017.

### **Infotechnological Mobility Observatory (IMO)**

The aim of the project is to create a comprehensive scientific data infrastructure for conducting surveys on the spatial mobility of the population, using both traditional statistical databases as well as modern infotechnological data sources. An important part of the infrastructure are databases of the 1989, 2000 and 2011 Population and Housing Census (PHC) and other national surveys. In the course of the project, the databases of the three censuses shall be organised, metadata shall be added, variables used in censuses shall be harmonised and a joint census database enabling to carry out scientific research on the mobility of people during two decades shall be set up. Next, the data of databases shall be added for scientific use. The project is run by the University of Tartu and participants include Tallinn University of Technology, Tallinn University and Statistics Estonia.

### **Mapping the municipal services network**

Within the framework of the National Audit Office's audit “Problems related to the use of European Union and other infrastructure support in local governments”, Statistics Estonia calculated the service areas of municipal services (kindergartens, primary schools, basic schools, upper secondary schools, sports schools, hobby schools, cultural institutions, libraries and youth centres). Service areas were formed on the basis of the survey “Era- ja avalike teenuste ruumilise paiknemise ja kättesaadavuse tagamisest ja teenuste käsitlemisest maakonnaplaneeringutes” (“Spatial distribution of private and public services, ensuring their availability and treatment of services in county plans”) (RAKE 2015). The number of service users living in service areas, benefits and area per user were calculated. The results were published in Statistics Estonia's map application.

### **Publication “Minifacts about Estonia 2017”**

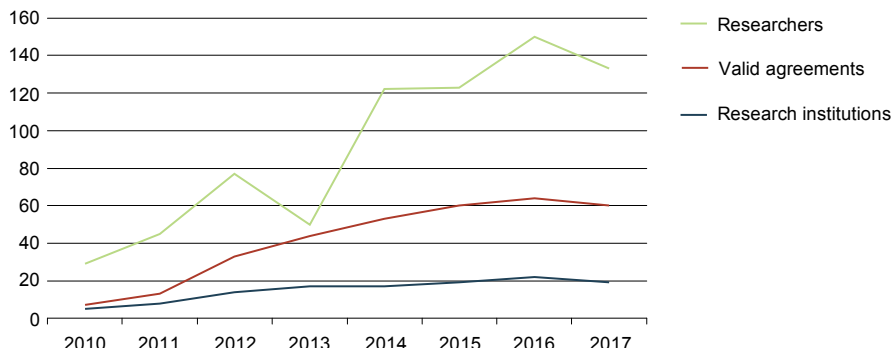
In cooperation with the Ministry of Foreign Affairs and the Government Office, a pocket-sized reference book “Minifacts about Estonia” was compiled. The popular pocket-sized reference book provides a concise overview of the development of different fields in Estonia. Domains covered include population, education, labour market, finance, industry, business, foreign trade, tourism, etc., as well as data on other European Union countries.

### **Using microdata collected for statistical purposes for research**

In order to generate more value in the society by reusing the existing data, research institutions can obtain access to the microdata collected by Statistics Estonia with statistical activities, provided that the data are used for research purposes. The decision to grant access is made by Statistics Estonia on a case-by-case basis, taking into account the risk of identification of individuals and data confidentiality. The type of access to the data depends on the combination of these two factors. References to such research can be found on Statistics Estonia's website.

Research institutions are showing increasing interest in the use of microdata. In 2017, a total of 19 applications for using the data were submitted and 17 agreements were concluded. Two thirds (68%) of such users use the information in the researchers' environment via the internet and the remaining third in the premises of Statistics Estonia. Agreements for use of confidential data are concluded for five years at most. At the end of 2017, there were 60 valid agreements with 19 research institutions and on the basis of agreements, 133 researchers had the right to access microdata. Every tenth agreement has been concluded with a foreign research institution.

#### Agreements for using microdata and users, 2010–2017



The data most often used for research purposes include the data of personal surveys, i.e. the Estonian Social Survey, the population and housing census, the Labour Force Survey and the Innovation Survey and financial indicators of enterprises.

#### Audit by PricewaterhouseCoopers for increasing Statistics Estonia's efficiency

In 2017, international consultancy company PricewaterhouseCoopers carried out an analysis for increasing efficiency in Statistics Estonia. The aim of the project was to assess the efficiency of Statistics Estonia's work processes and management system and to obtain proposals for improving the efficiency of the organisation's work, activities and management system. The project was carried out at the request of the Ministry of Finance and Statistics Estonia. The audit was carried out from 23 January until 23 December 2017.

According to the terms of reference, the project had three bigger stages:

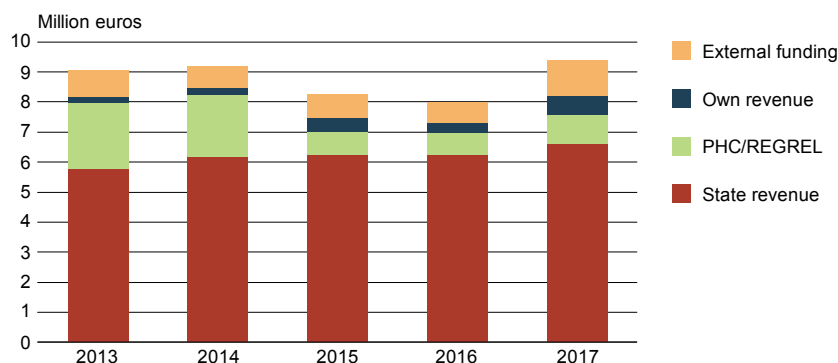
1. The aim of the **analysis of statistical activities** was to assess the value of the activities performed, the actual usability of collected data and to identify duplicate activities in Statistics Estonia and other institutions, with a focus on duplicate data output in Statistics Estonia and other institutions. The main suggestion was that in the future, Statistics Estonia should use output indicators instead of statistical activities to identify client needs and for pricing. Statistics Estonia also needs to improve the principles for the identification of the need for output indicators, which includes improving the preparation of the statistical programme and fixing national output indicators and those arising from EU legislation to ensure that Statistics Estonia does not produce within the framework of the statistical programme output indicators which are orders for information. In addition, it was found that orders for output indicators of national statistical activities which are not required by EU legislation or national laws/legislation should be tied to the resources of other public authorities, i.e. the budget of the entity ordering the activity (unnecessary orders shall be discontinued, paid service).
2. **Organisational analysis** indicated what should be done to achieve the desired results. In the case of systems describing production data, it should mainly be decided which duplicate systems shall be removed, and the analytical tools used should be harmonised across the departments. In order to speed up the implementation processes, to eliminate duplicates, additional money by way of one-time funding and additional competent employees to introduce IT development projects should be involved. Statistics Estonia must modernise its personnel management to ensure meeting the needs stemming from the changed and complex management structure (incl. influence of Lean) and an increase in the complexity of the main process (e.g. increase in the necessity of IT competencies). Salaries paid to employees need to be increased to hire and secure employees with sufficient (incl. IT) competencies.
3. **Analysis of the management system** revealed bottlenecks, and proposals for the improvement of the management system were made on the basis of this information. The main suggestions were: the management must ensure central management of the Lean management system, i.e. guarantee sufficient resources for it, put together a relevant action plan and ensure communication across the organisation. If, while putting together the action plan, inadequacy of financial and human resources is detected, the extent of the change or schedule should be adjusted accordingly. In order to make use of the potential benefit of Lean, the management must in the current development stage lay down in the Lean management system clear responsibilities for employees.

In addition, it was pointed out that the value of statistical activities should be brought into line with actual costs. In the full production cost also the costs of the State Real Estate Ltd should be included, and, in the future, the possibility must be created to include also the costs of the Information Technology Centre of the Ministry of Finance and the State Support Service Centre into the production cost of all the statistical activities/output indicators. Fair cost accounting should be supported by improving the use of the time reference system (harmonisation, standardisation, introduction of obligation and automatic controls).

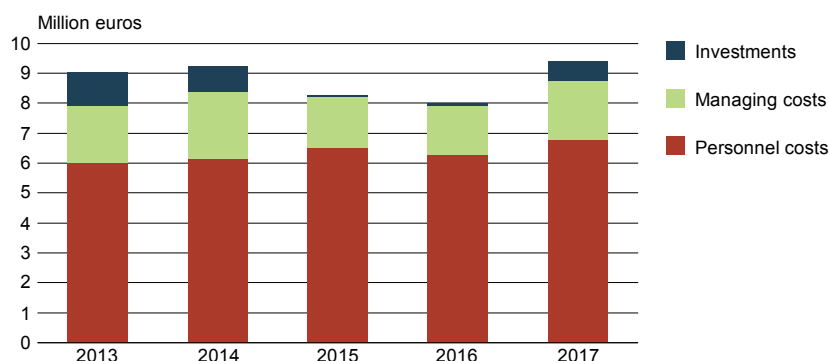
## Financing

Statistics Estonia's activities are funded from state revenue, own revenue (income from economic activities) and external funding. Population and housing censuses (PHC and REGREL) receive separate funding from the state revenue.

### Financing of Statistics Estonia's expenses, 2013–2017



### Statistics Estonia's operating costs and investments, 2013–2017



In 2017, operating costs totalled 8.8 million euros – personnel costs 6.8 million, managing costs 2 million and investments 0.6 million euros. Compared to 2016, the expenditure increased by 18%, incl. an 8% increase in personnel costs, 23% increase in managing costs and seven-fold increase in investments.

The increase in personnel costs was due to the additional costs of the Estonian Presidency of the Council of the European Union as well as an increase in the average salary.

1.6 million euros, or 79% of the 2017 managing costs were financed from state revenue. These costs are mostly related to the rent and maintenance of office buildings, business trips and training, ICT needs. Following an increase in the volume of work, expenses covered from external funding have increased approximately 2 times and those from own revenue approximately 4 times. The twofold increase in the costs of PHC and REGREL is related to the planned census activities.

## Statistics Estonia's operating costs and investments, 2013–2017

(thousand euros)

	2013	2014	2015	2016	2017
<b>Total expenditure</b>	<b>9,053.1</b>	<b>9,208.9</b>	<b>8,279.1</b>	<b>7,985.2</b>	<b>9,398.1</b>
Operating costs	7,920.5	8,377.4	8,210.4	7,896.2	8,764.4
personnel costs	5,990.9	6,121.2	6,498.2	6,265.2	6,760.3
managing costs	1,929.6	2,256.2	1,712.2	1,631.0	2,004.1
IT investments	1,100.7	819.1	68.7	89.0	633.7
Other investments	31.9	12.4	0.0	0.0	0.0
<b>Expenditure from state revenue</b>	<b>5,788.7</b>	<b>6,189.2</b>	<b>6,242.6</b>	<b>6,237.5</b>	<b>6,626.2</b>
operating costs	5,705.1	6,144.8	6,242.6	6,237.5	6,506.6
personnel costs	4,420.0	4,606.5	4,775.4	4,784.0	4,918.5
managing costs	1,285.1	1,538.3	1,467.2	1,453.5	1,588.1
IT investments	51.7	32.0	0.0	0.0	119.6
Other investments	31.9	12.4	0.0	0.0	0.0
<b>Expenditure from own revenue</b>	<b>218.7</b>	<b>248.5</b>	<b>459.1</b>	<b>307.5</b>	<b>679.3</b>
operating costs	218.7	226.9	447.7	307.5	679.3
personnel costs	176.2	207.6	376.5	272.9	539.4
managing costs	42.5	19.3	71.2	34.6	139.9
IT investments		21.6	11.4		
<b>Expenditure from external funding</b>	<b>877.4</b>	<b>730.9</b>	<b>793.9</b>	<b>685.3</b>	<b>1,162.5</b>
operating costs	767.6	646.2	736.6	596.3	648.4
personnel costs	634.7	604.0	686.9	541.9	562.9
managing costs	132.9	42.2	49.7	54.4	85.5
IT investments	109.8	84.7	57.3	89.0	514.1
<b>PHC 2011 expenditure</b>	<b>1,007.3</b>	<b>194.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
operating costs	544.6	194.6	0.0	0.0	0.0
personnel costs	294.8	161.0	0.0	0.0	0.0
managing costs	249.8	33.6	0.0	0.0	0.0
IT investments	462.7	0.0	0.0	0.0	0.0
<b>REGREL expenditure</b>	<b>1,161.0</b>	<b>1,845.7</b>	<b>783.5</b>	<b>754.9</b>	<b>930.1</b>
operating costs	684.5	1,164.9	783.5	754.9	930.1
personnel costs	465.2	542.1	659.4	666.4	739.5
managing costs	219.3	622.8	124.1	88.5	190.6
IT investments	476.5	680.8			

## Personnel

The main objective of Statistics Estonia's personnel policy is to ensure that in the organisation there are motivated and competent employees needed for achieving the aims and performing the tasks of the organisation.

### Staff and number of employees

The total number of places of employment in Statistics Estonia has not changed compared to the previous year – on 31.12.2017 there were 397 places of employment in the staff, including 236.5 posts and 160.5 jobs. As in recent years, the number of employees was on a downward trend. The average number of full time equivalent employees decreased in 2017 by 2%. Compared to 2013, the number of employees has decreased by 10% in total<sup>a</sup>.

### Statistics Estonia's employees, 2013–2017

Year	Number of places of employment in staff as at 31.12	Number of employees as at 31.12		Average annual number of employees		Average annual number of full time equivalent employees	
		Total	Without interviewers	Total	Without interviewers	Total	Without interviewers
2013	439	407	347	421	348	358	324
2014	419	434	348	413	331	349	313
2015	415	402	336	397	321	337	302
2016	397	392	329	398	319	335	295
2017	397	390	316	378	312	320	290

<sup>a</sup> Does not include interviewers, as their number may differ considerably each year due to cyclical statistical activities.



84% of the staff (incl. interviewers) of Statistics Estonia are women and 16% are men; the average length of service in the organisation is 10 years and 7 months and the average age is 50 years. 77% of employees have higher education (87% without interviewers). Over the past year, the distribution of employees by sex and education and the average age did not change significantly. In 2017, the voluntary turnover<sup>a</sup> in Statistics Estonia was 10.9%. Compared to previous years, the turnover has increased somewhat and still exceeds the average turnover of national authorities, which was 7% in 2016<sup>b</sup>.

## Remuneration

The average gross salary of Statistics Estonia's employees increased by 8.4% over the past year. The increase in the gross salary has been affected the most by the 9.5% increase in the average basic salary – at the end of 2016, the average basic salary stood at 1,205 euros, but on 31.12.2017, at 1,320 euros. An increase in salaries has been possible mainly due to better management of the organisation's financial and human resources and the subsequent reduction in the number of employees.

### Average gross salary, 2013–2017

Year	Monthly gross salary	Change on previous year, %
2013	1,035	
2014	1,153	11.4
2015	1,202	4.2
2016	1,231	2.4
2017	1,334	8.4

## Family-Friendly Employer label

In September 2017, Statistics Estonia was awarded an initial Family-Friendly Employer label in recognition of the achievements thus far in making the organisation more family and employee-friendly, and as a confirmation of the organisation's aim to reach a Family-Friendly Employer higher level label.

At the end of 2016, Statistics Estonia decided to participate in the family and employee-friendly employer project of the Ministry of Social Affairs and apply for a Family-Friendly Employer label.

At the beginning of 2017, self-assessment was carried out and meetings between the employer and representatives of employees with the consultant and assessor were held. In the light of the pre-assessment results, Statistics Estonia decided to apply for the silver label; priority fields which shall be the main focus of improvement during the project were selected. Also an action plan for reaching the desired level was drawn up.

The most important measures that have been or shall be introduced are:

- promoting family and employee-friendly work culture;
- implementation of teamwork and development of team leaders;
- updating the recognition and motivation system;
- describing career paths for employees;
- updating the recruitment process;
- promoting a healthy and active lifestyle.

## Development and training

Compared to 2016, the training volume decreased by 35%, remaining at the level of 2015. The decrease was mainly due to a decrease in the volume of public service central training (incl. presidency training) as well as the ending of Lean team training. As in 2016, in-house training accounted for 50% of the total training volume, which is more than in 2015 and in earlier years. In 2017, the focus was more on commissioned training addressing the needs of specific target groups, organised on the basis of training priorities approved by the management, which is why the share of custom-made training increased by a third.

In 2017, priority was given to training related to increasing management capacity, developing public speaking skills and to communications training required in posts related to client communication. As in previous years, the most voluminous areas of training were related to the main activity of the organisation (52% of total training hours), IT training (14%) and management training (11%). A significant share of training related to the main activity of the organisation consisted in the "European Statistical Training Programme (ESTP)" training (19 participants), department briefings (27 briefings with 674 participants) and in-house training of interviewers (17 training sessions with a total of 253 participants, incl. training of the Viljandi telephone interviewers' team at the end of the year). Commissioned training was provided on questionnaire design methodology to employees in the Statistics Design Department.

Due to an increased use of commissioned training as a relatively more expensive form of training and decreased capacity of free central training (incl. training in preparation for the Presidency) and in-house training, training costs increased by 37% compared to the previous year.

<sup>a</sup> Voluntary turnover reflects only those who left work on their own initiative.

<sup>b</sup> According to the 2016 civil service report.



## International cooperation

In 2017, employees of Statistics Estonia made a total of 283 international trips and visited more than 190 events. In international cooperation, the highlight of 2017 was clearly the Estonian Presidency of the Council of the European Union. 100 trips were made in connection with the Presidency, 80 of which were made to Brussels. Trips included 13 consultations of the working party, 5 meetings with the European Parliament and 4 trilogues. Two new cities where statisticians seldom go on business trips were added to the list of destinations in connection with the Presidency – the Presidency was taken over from Malta in Valletta and one of the trilogues held with the European Parliament took place in Strasbourg.

In the list of most visited cities in 2017, Luxembourg held the first place with 122 visits; Brussels, which hosted Presidency events was second with 86 visits and third was Vilnius with 10 visits.

Already for the second time in a short while, statisticians from the statistical office of Belarus (National Statistical Committee of the Republic of Belarus) visited Statistics Estonia to learn from our experts. While in 2016, visitors from Belarus were interested in tourism statistics, the Belorussian statisticians and employees of the scientific and technological association Infopark who visited Tallinn via the Estonian Center of Eastern Partnership at the beginning of March were interested in the electronic possibilities of census-taking.

On the second week of March, Statistics Estonia trained colleagues from Albania and Kosovo in tourism statistics. An overview of tourism statistics produced in Estonia was given from the perspective of both demand and supply. The reasons for producing tourism statistics, methodology and also production stages were addressed. The participants considered the meeting very useful.

## Statistics Estonia chaired the Council Working Party on Statistics

Estonia's aim was to reach an agreement with the Member States about two regulations: framework regulation on Integrated Farm Statistics (IFS) and Gross National Income (GNI) regulation; to start and finish trilogues on the territorial typologies regulation (TERCET); to continue discussions in the working group on the social statistics framework regulation (IESS); to open discussions on the enterprise statistics framework regulation (FRIBS); to organise the publication of the extension of the European statistical programme (ESP) to 2018–2020. Outside the scope of the Council Working Party on Statistics, Statistics Estonia promised to consolidate the opinion of the Member States for the Friends of the Presidency Group (Council working group; members include lawyers of permanent representations to the EU) on the statistics chapter of the Omnibus regulation amending 24 statistical regulations. Although during the Presidency, it seemed at times as if a lot more could be done, at the end of the period it could be stated that Statistics Estonia had fulfilled each and every aim regarding the seven regulations.

During the Estonian Presidency, two statistical regulations were published: ESP and TERCET.

- ESP extended the European statistical programme until the end of the current financial framework in 2020. The new period for both shall begin from 2021. The opportunity to carry out statistical activities for new policies, e.g. Europe 2020, Energy Union, employment and social policies, digital single market strategy, was added. Additional 25 million euros were allocated for the development of new statistics (1/2 to Eurostat, 1/2 to Member States). The Member States must find resources themselves for routine statistics production.
- TERCET sets up existing territorial typologies to improve international comparability (urban-rural, metropolitan regions, coastal areas, etc.) and the 1 km<sup>2</sup> grid level required to calculate other typologies which are based on population distribution and density in the grid cells. Such typologies are used, for example, for awarding grants from the European Regional Development Fund for implementing innovative measures in larger and smaller cities and urban neighbourhoods.

The undoubtedly greatest achievement was the successful trilogue on TERCET. The Parliament did not find it necessary to amend the Eurostat's text and Statistics Estonia as the Presidency-holder succeeded in defending all the amendments of the Member States. This was by no means a standard but rather an exceptional result.

The priority for Estonia was IFS. This regulation is time-critical for the Member States, as it provides a legal basis for the 2020 agricultural census (incl. the amount of financial coverage by the EU), which some Member States would like to conduct already in 2019. As this regulation was the first of the three framework regulations to be processed, it was important for all the parties to work out solutions which could be implemented also in the case of the other framework regulations. Statistics Estonia's team managed to reach an agreement between the Member States in October 2017, which was one of the objectives of the Estonian Presidency. As there was still some time until the end of the Presidency period, it was decided to enter into trilogues with the Parliament. The main controversy in these trilogues was that the Member States must keep the administrative burden of farmers and the expenditure of statistical offices under control, but the Parliament needs additional statistics on young farmers, farm-related accidents, organic farming, etc. Even if this classical producer-consumer controversy could have been solved in the course of trilogues, there was still the issue of legal ambiguity about whether derogations for statistics from the General Data Protection Regulation (GDPR) Article 89 are needed in regard to all four fundamental rights mentioned in the Article or only a few. And, if derogations are necessary, whether these should be laid down on EU or national level.

In addition to IFS, agreement between the Member States was achieved also on the text of the GNI regulation. This regulation harmonises the methodology for calculating the gross national income with the recently updated national accounting rules (ESA2010) and the deadlines for transmitting gross national income statistics to Eurostat with the deadlines for transmitting other national accounts statistics, which benefits especially those (especially large countries) who otherwise should, due to submission deadlines of input data, transmit statistics many times. Gross national income is important, as this is the basis for calculating the contributions of the Member States to EU's own resources, which account for approximately 3/4 of the total revenue of the European Union.

During the Estonian Presidency, the Working Party on Statistics dealt with nine regulations in total. In addition to the above-mentioned seven regulations, with updating the wording of the regulation on rail transport statistics and codifying the regulation on statistics of goods transport by inland waterways.

## NEW STATISTICAL ACTIVITIES IN 2018–2022

The list of statistical activities for 2018–2022 contains six new statistical activities.

Name of statistical activity	Expected cost, thousand euros					Basis for need for statistical activity	Type of statistical activity
	2018	2019	2020	2021	2022		
Reporting 3.0 (20012)	433.8	203.0	–	–	–	Commissioned nationally	Development
Model for quantitative assessment of policy impact (50021)	143.0	–	–	–	–	Commissioned nationally	Development
European Social Survey (40022)	105.0	19.5	–	–	–	Other international agreements	Non-regular statistics
Testing and piloting the survey on gender-based violence (40616)	95.3	–	–	–	–	Other international agreements	Development
Fleet-based economic and social indicators (20013)	33.9	30.2	–	–	–	EU legislation	Non-regular statistics
Integrating business statistics (FRIBS) into the European statistical system (20011)	25.0	–	–	–	–	EU legislation	Development

The statistical activity “Reporting 3.0” (20012) has been created within the framework of the project “Reporting 3.0”, with the aim of producing a technological solution for the automatic transmission of personnel and accounting data of great importance for the functioning of the state, based on the principle of minimalism and simplicity. The project is expected to end in December 2019, and from 2020, the respondents are expected to be able to submit all the required data straight from their accounting systems, and Statistics Estonia to have the capacity to receive and process the data, make statistical calculations and publish statistics. First, the wages/salaries and employment are addressed.

The aim of the statistical activity “Model for quantitative assessment of policy impact” (50021) is to support the legislative process of the state and contribute to increasing the public interest and inclusion in defining social and economic policy measures. The activity includes two preparatory phases: analysis of the planned development project and compilation of datasets needed as input for the microsimulation model. The analysis shall be based on the existing (micro)simulation models in Estonia analysing economic and social policy, on the experience of other countries, on the database and survey data already used in Statistics Estonia and on interviewing the users of the model. The analysis provides an assessment about the volume, stages and required labour and infrastructure costs needed and practical for carrying out the development project. The analysis will also indicate the need according to the users of the project for

- ensuring public availability of the models and improving the convenience of use (e.g. with the help of a web interface);
- improving the quality and efficiency of input data (e.g. by introducing and combining additional (register-based) data sources, speeding up the linking process of data sources);
- extending the functionality of the models (e.g. assessment of behavioural effects).

The non-regular statistical activity “European Social Survey” (40022) is an international social survey which measures attitudes, beliefs and human behaviour in more than thirty countries. Data for the statistical activity will be collected in 2018. Statistics Estonia shall transmit the collected and processed data to an international consortium. The statistical activity is commissioned internationally.

The aim of the statistical activity “Testing and piloting the survey on gender-based violence” (40616) is to test the questions developed by Eurostat for studying gender-based violence and to formulate amendments to the wording of the questionnaire. The statistical activity is commissioned internationally (paragraphs 1 and 2 of Article 11 of the Istanbul Convention) and is financed from external funding with mandatory own contribution.

The aim of the statistical activity “Fleet-based economic and social indicators” (20013) is to collect economic indicators for fulfilling the national programme “Estonian national action plan for the collection of primary biological, technical, environmental and socio-economic data of the fisheries sector in 2017–2019” and to produce statistics by the length class of vessels and by fishing gear. Statistics for 2018 are estimated to be published in December 2019 (the exact time will be published in the release calendar). The statistical activity arises from EU legislation and is commissioned and financed by the Ministry of the Environment.

The statistical activity “Integrating business statistics (FRIBS) into the European statistical system” (20011) is an activity created only for the development phase, after which, main statistics shall be produced within the framework of different statistical activities.

According to the vision of the European Statistical System for 2020 (ESS Vision 2020), more rapid response to the changing needs of users, reduction of the administrative burden of respondents and ensuring of better coherence of statistics between different domains are needed. For this, in 2011, a revision of the contents of the legislation governing business and foreign trade statistics and the creation of a new and flexible legislation system were started. According to Eurostat’s schedule, the processing of the Framework Regulation Integrating Business Statistics (FRIBS) takes place in 2017, and the new regulation

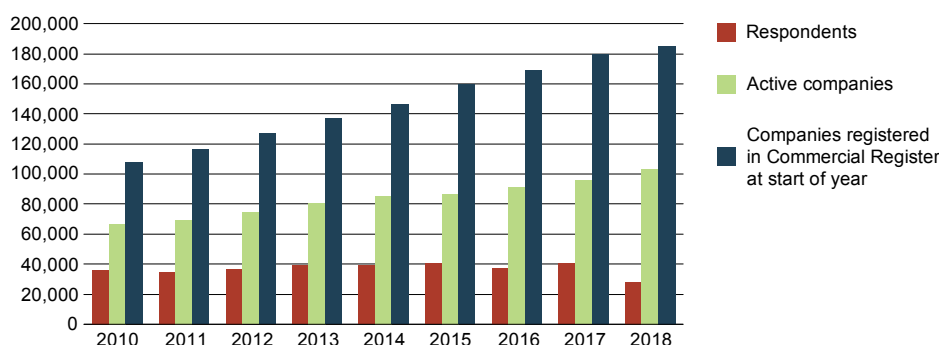
is scheduled to take effect in 2018. The new framework regulation shall introduce bigger or smaller changes into statistical activities with the following codes: 20007, 20102, 20103, 20300, 20319, 20401, 20403, 20408, 20413, 20505, 20903, 21300, 21308, 21601, 21701, 22201, 22203, 20312 and 21702. According to the preliminary schedule, two years at most will be given for the implementation of the new requirements. The most significant changes are the following:

- the statistical activity “Financial statistics of enterprises (annual)” (20300) shall include cyclical statistics on global value chains and international procurement;
- the statistical activity “Financial statistics of enterprises (quarterly)” (20007) shall include monthly volume statistics on wholesale of goods and sale of business services by economic activity;
- the statistical activity “Service producer price index” (20413) shall include a double amount of business services for which service price indices must be calculated;
- the statistical activity “Business demography” (20903) shall be extended by adding quarterly statistics on registration of enterprises and bankruptcies;
- in the statistical activity “Foreign trade” (22303), the data source for the production of statistics on imports of goods shall be changed. Currently, data are being collected from importers, but to reduce the administrative burden, microdata collected by other Member States on exports are planned to be used (exports of other countries to Estonia are imports of Estonia from other countries). Change of data source makes the production of statistics more expensive.

## ADMINISTRATIVE BURDEN OF RESPONDENTS

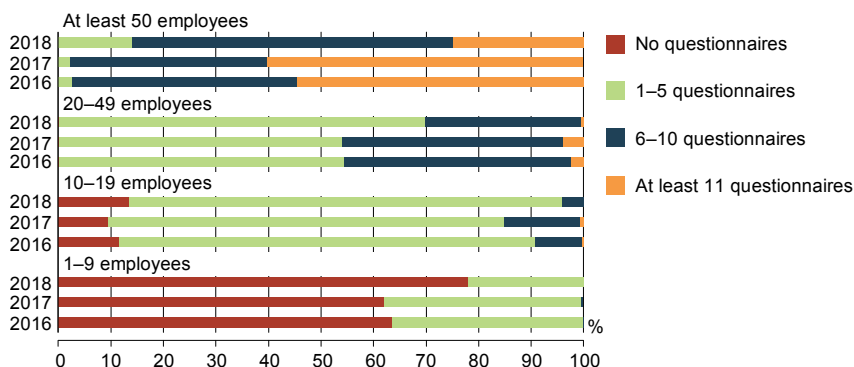
In Statistics Estonia, two indicators are used to assess the reporting burden: the number of questionnaires per respondent and the time spent on completing questionnaires. To distribute the burden of respondents more evenly, sample surveys are used if possible, in which case data are submitted by only a part of the target group. Also, survey samples are coordinated so that samples of different surveys would not overlap. In 2012–2018, the number of registered companies in the commercial register has increased by a third and the number of active enterprises by nearly a quarter. At the same time, the number of reporting entities has stood at 40,000 in recent years due to the use of sample surveys and introduction of databases. Although the number of respondents in 2018 is currently preliminary, a decrease in their number compared to previous years may be estimated.

### Companies registered in Commercial Register, enterprises in statistical profile and enterprises with data reporting obligation, 2010–2018



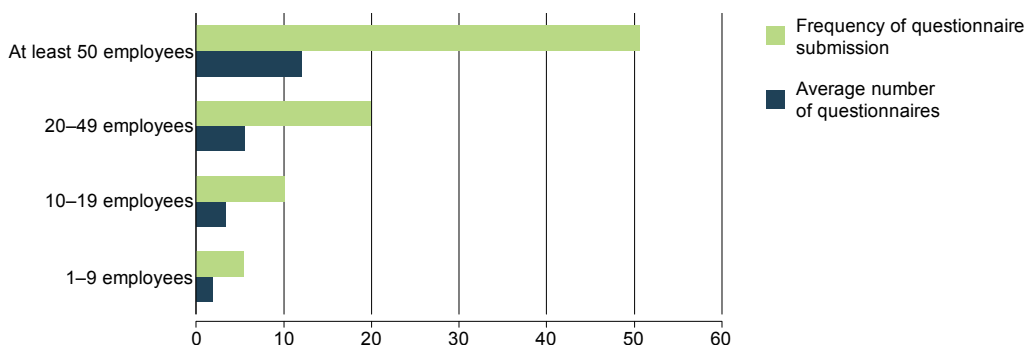
Samples can be coordinated better in the group of small enterprises (1–9 employees), where the number of enterprises is high and relatively small samples will suffice. 62% of small enterprises did not have to submit any questionnaires in 2017, 38% completed up to five questionnaires and only a small proportion had to complete more than five questionnaires. The burden of enterprises with 1–9 employees in 2017 was approximately the same as in 2016 when 63.5% of small enterprises did not have to submit any questionnaires. In the group of enterprises with 10–19 employees, 90% of enterprises were required to complete a questionnaire of some kind. The burden of enterprises with 50 or more employees is considerably greater: 60% of such enterprises had to submit more than 10 questionnaires a year.

### Companies by size and number of questionnaires to be completed, 2016–2018



The average number of questionnaires per respondent was 2.6, remaining at the same level as in 2016. One enterprise had to submit 25 questionnaires at most. Considering questionnaire completion frequency, i.e. 12 separate completions of monthly questionnaires and 4 completions of quarterly questionnaires, the average number of questionnaires to be completed is as follows: enterprises with 1–9 employees complete fewer than 6 questionnaires per year on average, while enterprises with 50 or more employees have to complete more than 4 questionnaires per month on average.

### Number and frequency of questionnaires to be completed by size of company, 2017



In 2017, cyclical statistical activities “Labour costs” (sample size 10,000 enterprises and institutions) and “Innovation in enterprises” (sample size 2,175 enterprises) were carried out, which increased the reporting burden of enterprises. In 2018, cyclical statistical activities “Labour costs” (sample size 10,000 enterprises and institutions) and “Innovation in enterprises” (sample size 2,175 enterprises) shall be carried out, which increases the reporting burden of enterprises somewhat.

Statistics Estonia has done the following to reduce the administrative burden of enterprises:

- started using database data for pre-filling questionnaires and for partial or complete replacement of questionnaires;
- cross-used data collected from enterprises;
- reduced the number of small enterprises subject to submitting questionnaires if the impact of the reduction on the quality of statistics is minimal;
- improved the quality of questionnaires.

Database data are used for pre-filling questionnaires and for their partial or complete replacement. Questionnaires are pre-filled with data from annual reports, the register of taxable persons (employment register, value added tax return, declaration of income and social tax) and ARIB (Agricultural Registers and Information Board). Annual reports were first used in 2012, other sources in 2014. The pre-filling of questionnaires with annual report data reduced the time spent on filling in a questionnaire by 50% at most.

With the introduction of the annual report, the sample for the EKOMAR questionnaire has been consistently reduced. In four years, the sample has decreased from 11,000 to 8,600. This has significantly decreased the response burden of microenterprises.

### Reduction of the sample for the EKOMAR<sup>a</sup> questionnaire, 2013–2018

	2013	2014	2015	2016	2017	2018
Total population	66,500	69,970	72,392	75,575	79,210	89,935
Sample	11,139	10,559	10,174	7,946	8,512	8,603
Decrease in sample compared to 2013		-580	-965	-3,193	-2,627	-2,536

<sup>a</sup> Statistical activity “Annual economic indicators of enterprises”

The burden of enterprises has also decreased as a result of cross-using the collected data in Statistics Estonia. This means that questionnaires are pre-filled with data from the same questionnaire of the previous period or from other questionnaires. To improve the quality of questionnaires, a questionnaire specialist started work in Statistics Estonia in 2015; the specialist reviews the content of problematic questionnaires and tests questions on respondents.

In 2017–2018, the following activities have been planned in Statistics Estonia to reduce the administrative burden:

- to optimise data collection within the framework of the project “Reporting 3.0”; starting from 2018, the enterprises which have joined the project can submit labour force and wages/salaries information automatically.
- to extend the use of database data already used in the production of statistics to other statistical activities and investigate possibilities for using new databases. In 2018, the households’ income dataset is planned to be developed, which would be the basis for the prediction model of the impact of policy changes.
- to analyse the possibility of using other data sources besides state databases. Hourly electricity consumption data have been received from the Elering Data Hub and the data is being analysed to assess its suitability for producing statistics. The aim is to use electricity consumption data to assess the occupancy of dwellings during the register-based population and housing census.

An important modification in 2018 is redesigning the questionnaires “Wages and salaries” and “Job vacancies and labour turnover” used until 2017 into a single questionnaire “Wages and salaries and labour force” and a significant reduction of the sample size of questionnaires in the group of small enterprises.

**Redesigning employment and wages and salaries questionnaires and samples, 2017–2018**

Size group	2017		2018	
	Total sample of questionnaires "Wages and salaries" and "Job vacancies and labour turnover"	incl. inclusion in both samples	Sample of questionnaire "Wages and salaries and labour force"	Change in 2018 sample compared to 2017
1–9 employees	8,780	8,378	3,737	–5,043
10–19 employees	1,099	821	1,226	127
20–49 employees	1,152	975	1,233	81
At least 50 employees	1,936	1,936	1,851	–85
Total	12,967	12,110	8,047	–4,920

The number of questionnaires to be completed in 2018 is preliminary because over the course of the year, new entities will be subjected to reporting, e.g. an enterprise is added to the sample of foreign trade questionnaires if the enterprise's exports or imports turnover exceeds the set threshold. Also, samples for some questionnaires are drawn later.

To assess the administrative burden, Statistics Estonia has since 2008 asked respondents to indicate the time spent on completing questionnaires submitted through the electronic data transmission channel eSTAT. Starting from 2016, the marking of time spent on completing a questionnaire is mandatory for one period of each questionnaire. For quarterly questionnaires, the period is the 3rd quarter and for monthly questionnaires, April. As Intrastat questionnaires are mostly submitted via a special channel, in 2017, for the first time, data about the time spent on completing the questionnaire was collected also in this channel. The answers about one period will be applied to the rest of the periods of the same enterprise. The missing or improbable values are imputed.

**Average time spent on completing a questionnaire by frequency of questionnaire completion, 2014–2017**

(minutes)

Frequency of questionnaire completion	2014	2015	2016	2017
1–2 times a year	125	136	104	97
4 times a year	36	35	40	35
12 times a year	73	73	77	62
Total	70	73	70	60

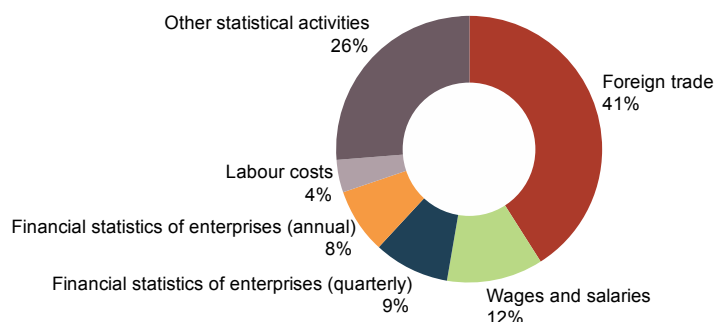
In 2017, on average, less time was spent on completing questionnaires than in 2016. In 2017, on average, the completion of a questionnaire took one hour. Annual questionnaires take more time, while quarterly questionnaires are less time consuming. The average time spent on completing monthly questionnaires is affected primarily by extensive foreign trade questionnaires. The average time spent on an Intrastat form is 2 hours. Other monthly questionnaires take 0.5 hours, on average. In total, Estonian enterprises, institutions and organisations spent 35,100 working days on the completion of questionnaires in 2017.

**Total completion time of questionnaires, 2011–2017**

(working days)

	2011	2012	2013	2014	2015	2016	2017
Main statistics	49,000	43,900	40,200	41,000	38,300	38,200	33,400
incl. Intrastat	23,000	20,900	19,400	19,800	18,500	18,200	14,400
Non-regular statistics	6,200	200	3,200	0	4,000	4,000	1,700
Total	55,200	44,100	43,400	41,000	42,300	42,200	35,100

In the following figure, those statistical activities have been included in the case of which the data submission burden exceeded 1,000 working days in 2017.

**Distribution of data submission burden by statistical activity, 2017**

## Project “Reporting 3.0”

The aim of the project “Reporting 3.0” is to reduce the administrative burden of enterprises and institutions. In the course of the project, the opportunity to submit data straight from the accounting systems shall be created. The data collection methodology shall change – collection with questionnaires and reports shall be replaced by transaction-based data collection. In addition to filling in a questionnaire on the screen, data can be submitted automatically. The burden of data calculation shall shift from the respondent to Statistics Estonia.

The first stage of the project in 2017 focused on enabling automatic transmission of wages/salaries and labour force data reported to the Tax and Customs Board and Statistics Estonia from the beginning of January 2018. In the coming years, similar capacity shall be created for the transmission of the rest of datasets – income, expenditure, assets, liabilities, prices, etc.

In the beginning of 2016, the required data composition was fixed in Statistics Estonia. In 2017, the data composition was described with classifications and data fields, which were linked with the elements of the financial data reporting language standard XBRL GL. Required datasets are transmitted to Statistics Estonia in this file format.

In 2017, the project made it from substantial internal preparatory work in Statistics Estonia to outward-oriented activities: activities required for carrying out the project were described for software developers and data providers, and the respective information was published. In cooperation with the Tax and Customs Board, events were organised for developers and accountants, where the initial idea behind the project was recalled, an overview of the current state of affairs and future activities was given and the work which needs to be done to be able to submit data automatically from the accounting system of the respondent was explained. For this, the software developer needs to tag or enable to link all entries with the developed taxonomy, i.e. the columns of classifications and data fields. In the software, the transmission of the XBRL GL file standard prepared based on the taxonomy via the data transmission layer X-Road must be enabled. Data providers must create compliance between “Reporting 3.0” taxonomy lists and the characteristics of the enterprise’s data composition. Once such a connection between the list and a client’s entry has been created, this part of the taxonomy is automatically found in the future and can be transmitted to Statistics Estonia from there.

In September 2017, more detailed information about the project was published in a special section on the websites of Statistics Estonia and the Tax and Customs Board. Initial guidelines were published for developers and data providers, and sample files were made available, with the help of which, it was possible to start making the required changes in the accounting systems.



## ASSESSMENT OF QUALITY OF STATE DATABASES

In 2017, Statistics Estonia assessed the quality of the databases that shall be used for the register-based population and housing census (REGREL). The aim was to assess the suitability of the databases for conducting REGREL. The following quality indicators were used for the assessment of quality.

- Coverage of the population is at least 97% – only those databases were assessed which should cover the whole population of persons, dwellings or economic entities.
- In the case of characteristics needed for the census, information is updated on a regular basis and is documented – in the case of each database, the frequency of submitting the data required for REGREL to Statistics Estonia was indicated.
- At least 95% of the entries have standard format identifiers – depending on the content of the database, the identifier may be a personal identification code, registry code of an enterprise or institution and/or address code.
- The coverage of characteristics required for the census is at least 95% – on the basis of the selected characteristics, it was assessed whether the required characteristics in the database are sufficient for quality census-taking.
- In the value of the characteristics required for census there are no significant or technical errors in more than 1% of cases – the compliance of the values of the selected characteristics with the requirements was assessed with logical connections or in comparison with other databases.

16 databases were assessed, and of those, the indicators of ten databases received a good or very good assessment, i.e. all indicators exceeded the established quality threshold. In the case of some indicators, four databases received a satisfactory assessment and in two databases considerable deviations from the quality level were detected in the case of some indicators.

Coverage of the population was assessed in the case of those four databases which should include all the units – the population register, the Address Data System, the construction register and the commercial register. The most problematic is the quality of the construction register, which covers 95% of the population, which is below the established threshold. The coverage of the commercial register and that of the Address Data System has been assessed to be 100%. Over- and undercoverage issues have been detected in the population register.

As regards the updating of databases, the frequency of data transmission to Statistics Estonia was assessed. Some databases are updated every day, while some are updated only once a year. Data are captured every day from the Address Data System and the population register.

In the production of statistics on the basis of databases, it is important to be able to link the data received from different sources, which is why also the occurrence and quality of the three main identifiers – the personal identification code, registry code of an enterprise and address code – were assessed in databases. In general, the occurrence and quality of identifiers is good. There are more shortcomings regarding the address code.

In order to assess the suitability of database data for census-taking, mainly those characteristics which are required for the production of statistics were assessed in the case of each database. Two aspects were assessed in the case of characteristics: existence of variable values and absence of errors. Missing values are of greatest concern in the construction register where the share of missing values as regards many characteristics amounts to 20–30%. Significant differences have become apparent also from the comparison of data in the construction register with survey data, which refers to problems with the updating of the construction register data.

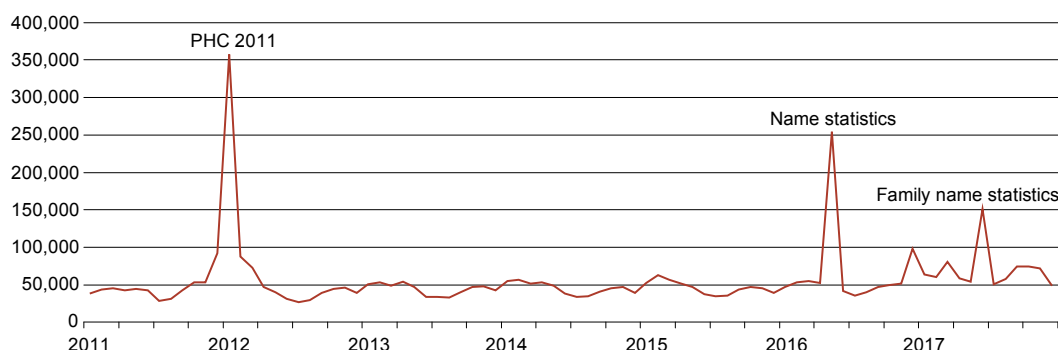
A more detailed report on the quality of databases is available on the website of Statistics Estonia.

## USERS' SATISFACTION WITH OFFICIAL STATISTICS

All the information published by Statistics Estonia is available to the public for free on the website of Statistics Estonia. In 2017, the number of visitors to the website increased by 2.4% compared to 2016. A significant contribution to the increase was made by the popular family name statistics application published in June.

The website received on average 16,200 visits per week, of which 79% were made from Estonia. A quarter (24%) of website visits were made via smart devices (23% in 2016). The highest visitor numbers were recorded in March and June and the lowest in July and December.

### Number of visitors to website by month, 2011–2017

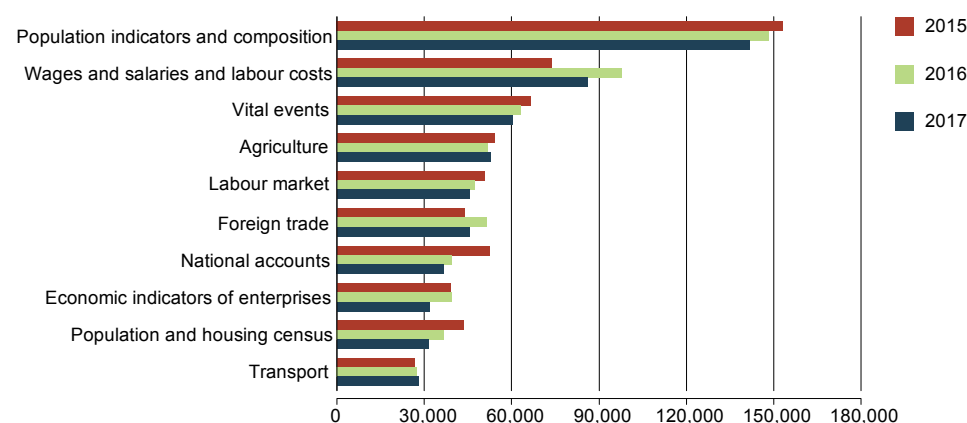


The most popular source for statistical information is the statistical database with 113,000 visitors in 2017; the number increased by a fifth compared to 2016. During the last months of the year, the new database platform .Stat was made available, which contributed to the increase in the number of visitors. Next in popularity from channels used for finding statistics are news releases and pre-defined tables; the use of both increased over the course of the year (news releases 16% and pre-defined tables 28%). The use of the e-publication "Piirkondlik portree Eestist" ("Regional Portrait of Estonia") and of main indicators and the number of downloads of publications have decreased somewhat (10%).

While in the past years, the number of requests for information by phone and e-mail has decreased, in 2017 it increased 10%. Since September, a new communication channel has been used for communicating with statistics users – online chat, which was immediately put into active use by the users. Although at the moment Statistics Estonia uses passive chat, i.e. the client must initiate the conversation, the average number of online chats per month somewhat exceeds the number of conversations by e-mail and is 1.5 times the amount of orders for information made by phone.

As in the previous years, the most popular statistical domains in 2017 were population indicators and vital events, wages and salaries and labour costs, agriculture, labour market and foreign trade. Also the ranking of the most popular domains has remained unchanged in recent years.

### Most popular statistical domains<sup>a</sup>, 2015, 2016, 2017



<sup>a</sup> According to the number of views of the database and pre-defined tables.

## User surveys

### eSTAT user satisfaction survey

From February to December 2017, Statistics Estonia conducted a satisfaction survey of respondents to obtain an assessment of eSTAT, the electronic data submission channel of Statistics Estonia. A total of 11,900 letters were sent to respondents, inviting them to participate in the promoter index survey. More than 2,300 responses (20%) were received and more than 60 questionnaires were assessed.

Satisfaction was examined by using the promoter index methodology, which is based on the presumption that if people recommend someone or something to their friends or acquaintances, they assume responsibility for the quality of the recommended object. 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. The overall negative assessment of the convenience of the use of eSTAT has further increased compared to the previous year. The average promoter index in 2017 was –43 (–37 in 2016), which can be considered a poor result. No questionnaire received a positive assessment.

The highest scores were given to the completing of questionnaires “Export price” (0) and “Livestock farming” (–5); users were the least satisfied with questionnaires “Music” (–75), “Questionnaire for entrepreneurs” (–70) and “Information technology in enterprises” (–57).

The lowest scores are usually given to eSTAT by managers of small-scale enterprises, who fill in questionnaires only once or twice a year. The highest scores are given, for example, by accountants, who submit data more frequently and are thus more familiar with the system.

Respondents pointed out the following positive aspects:

- data submission is quick, convenient, easy;
- questionnaires are pre-filled;
- the accuracy of submitted data can be checked immediately.

The reasons for not recommending eSTAT to others can be divided into three:

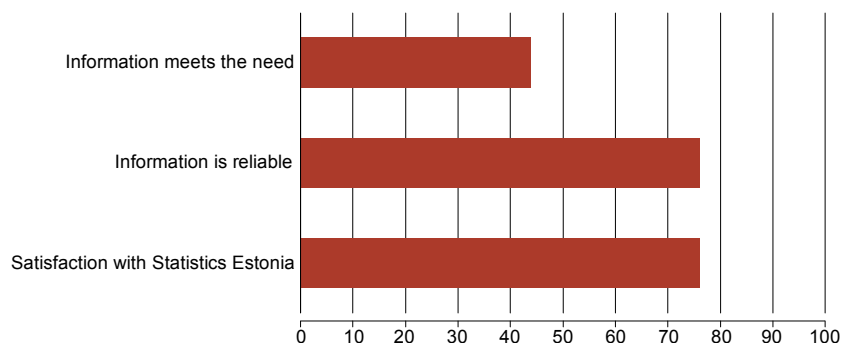
- problems with the data submission environment (the environment is not user-friendly, it is difficult to find the questionnaires, etc.);
- problems with the questionnaire to be filled in (the questionnaire is complex, instructions are lacking);
- reasons related to the reputation of Statistics Estonia (submission of data is considered annoying and time-consuming, the same data has to be submitted twice).

Statistics Estonia has asked respondents for feedback and proposals concerning eSTAT since 2015. Most of the questionnaire improvement activities were carried out in 2017, and this work will continue on an ongoing basis. eSTAT-related improvement activities have been planned for the years 2018–2019.

### Monitoring statistics users' satisfaction

From November 2017, Statistics Estonia asks the users submitting requests or orders for information and users of the database about their satisfaction with received replies and with Statistics Estonia. Users who have submitted requests or orders for information are sent the questionnaire once a month, and during the same period, the satisfaction questionnaire is also available at Statistics Estonia's database. Assessment can be given on a scale of 1 to 10 to three questions. To calculate the results, the methodology of the promoter index has been used, where the share of users who gave negative evaluations (<7) is deducted from the share of users who gave positive evaluations (9, 10).

#### Users' assessment of satisfaction with Statistics Estonia, 2017



### User survey of official statistics 2017

Statistics Estonia conducted a user survey of official statistics among the main users of official statistics from 18–30 April 2017. The aim was to determine the level of satisfaction with official statistics, how users rate Statistics Estonia and statistical domains and how actively statistical products and services are used. A similar survey was conducted in 2006, 2008, 2011 and 2014.

The target group of the survey included:

- institutions with which Statistics Estonia coordinates its annual statistical programme;
- organisations which have ordered Statistics Estonia's products and services in the past two years;

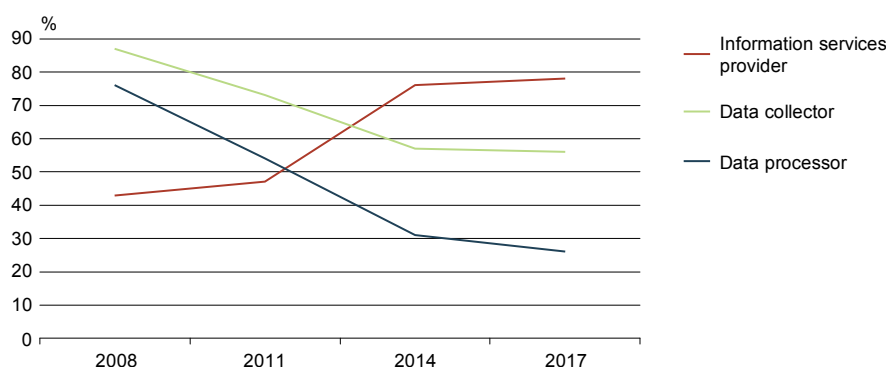
- users who have attended information days or conferences organised by Statistics Estonia;
- active readers of the newsletter.

The questionnaire was sent by e-mail to 4,000 contact persons, and it was also available to everyone on Statistics Estonia's website. The form was filled in by 761 persons (19%).

## Results

By 2017, the share of users who see Statistics Estonia primarily as an information service provider has increased. The share of users who think of Statistics Estonia as a data collector and processor continued to decrease. This means that Statistics Estonia has fulfilled an important goal in its strategy for the preceding years – to be a recognised information service provider in the society.

### Role most characteristic of Statistics Estonia, 2008, 2011, 2014 and 2017



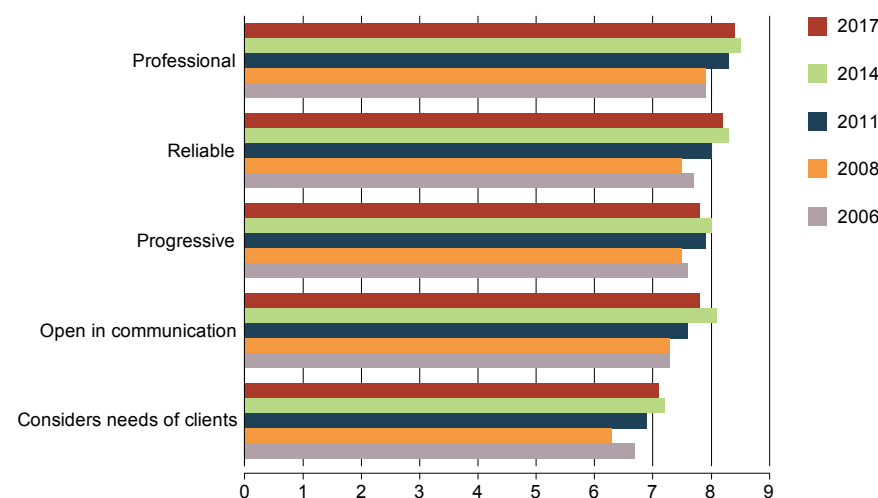
Compared to the previous survey, the scores given to Statistics Estonia as a provider of statistical information had slightly decreased, but remained high. The highest rating was given to Statistics Estonia's professionalism – the average score on a scale of 1 to 10 is 8.4, which is a very good result – as well as to reliability (average score 8.2). The rating for openness in communication has decreased (8.1→7.8) and the consideration of user needs continues to receive the lowest rating (average score 7.1).

Across user groups, Statistics Estonia was rated most highly by educational and research institutions, media enterprises and professional associations, while lower than average scores were given by enterprises and county governments and municipalities. The reasons behind lower rating were the following: difficulty of finding data from the website and database, not user-friendly, data are too general. Enterprises who have used the data collection system eSTAT do not consider Statistics Estonia very reliable or progressive, as the IT system has been designed poorly and is complex.

On the positive side, it was pointed out that cooperation with Statistics Estonia has been very fluent and pleasant, and that regular information days and conferences help stay informed about the changes made. Regular users of statistics pointed out that finding data in the database and on the website is easy, and if needed, specialists can be turned to for clarification. Users also praised Statistics Estonia's social media, interesting blog posts and infographics.

### Assessment of Statistics Estonia, 2006, 2008, 2011, 2014 and 2017

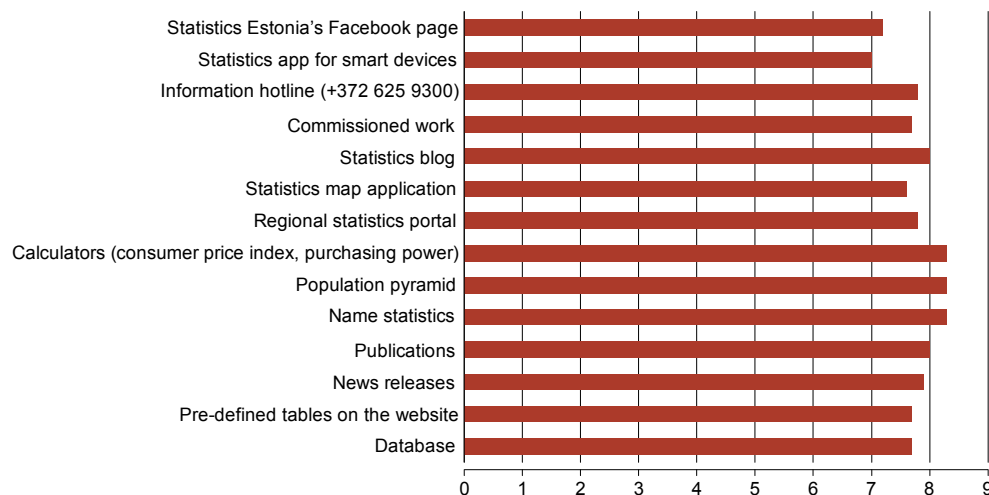
(on a scale of 1 to 10)



There was a separate question about the satisfaction with the dissemination channels of Statistics Estonia, which were asked to be rated on a scale of 1 to 10. The satisfaction rating given to information sources is very good, ranging on a scale of 1 to 10 from 7.0 to 8.3. Interactive products (name statistics, calculators and the population pyramid) received the highest ratings (8.3). Compared to the previous survey, the level of satisfaction with information sources has remained more or less stable, i.e. remains high.

### Satisfaction with Statistics Estonia's information sources, 2017

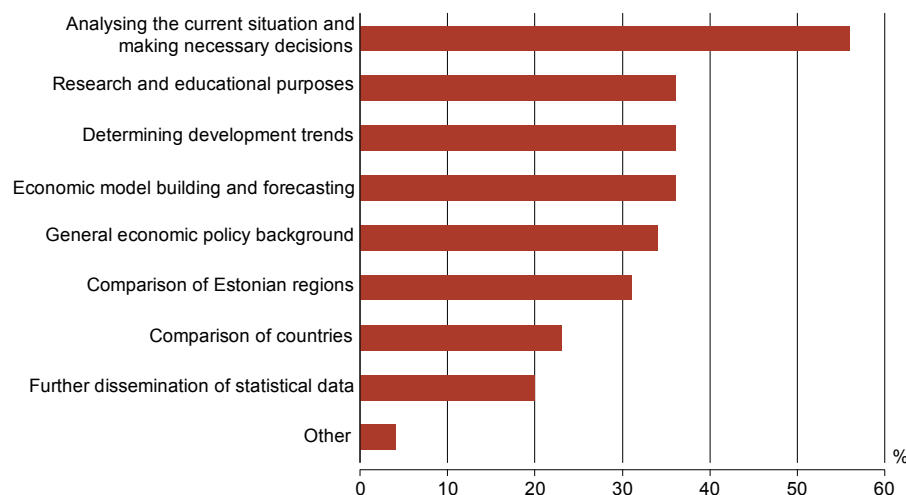
(on a scale of 1 to 10)



According to the user survey, the purposes of using official statistics have not changed over the years. A great share of respondents (as in 2008, 2011 and 2014) continue to use statistics to analyse the current situation and make necessary decisions (56%) and to determine development trends (36%).

The main reason for using statistics depends on the user group. Research and educational institutions use statistics mainly for research and educational purposes (75%). The public sector, county governments and municipalities use statistics mainly for analysing the current situation and making necessary decisions (70% and 66%, respectively). Media enterprises use statistics for getting general background information and for further dissemination of the data (63%).

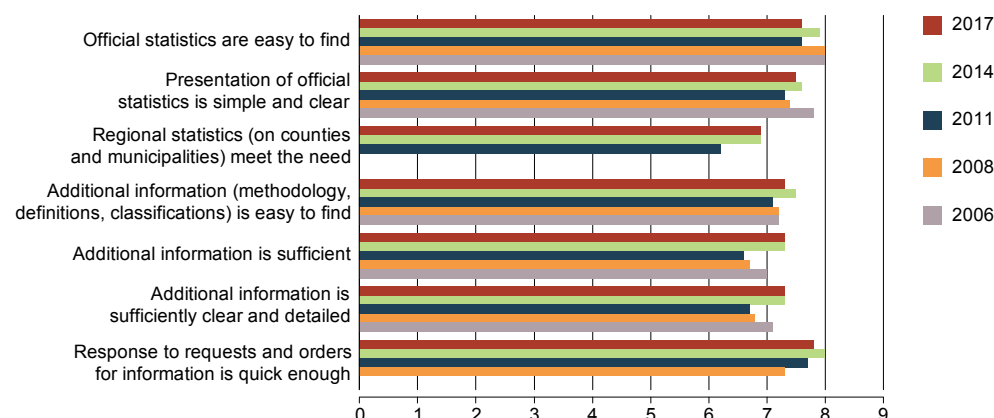
### Purposes of using official statistics, 2017



The average scores given to the accessibility and clarity of official statistics are slightly lower (0.2–0.3 points) in almost all aspects compared to the previous survey in 2014. The speed of response to requests and orders for information received the highest rating (7.8); this was followed by the ease of finding statistics and the simplicity and clarity of data presentation. The lowest score was again given to the compliance of regional statistics with user needs (6.9). In the case of regional statistics, users expect a higher level of detail in the published data than is currently provided. From user groups, enterprises are the most dissatisfied, while media enterprises, financial institutions and state authorities gave the highest ratings.

### Assessment of official statistics, 2006, 2008, 2011, 2014 and 2017

(on a scale of 1 to 10)



In conclusion it can be said that users are generally satisfied with Statistics Estonia but they expect a more user-friendly database and website. Statistics Estonia has already taken concrete steps as regards both of these: at the end of 2017, the new database software .Stat was launched in beta and website development has been planned for 2018–2019. According to the survey, users also require more current and detailed information, e.g. in the fields of population, labour market, manufacturing, energy and finance, as well as more detailed regional statistics – exact number of residents, financial data, households, tourism, wages/salaries, labour market, comparisons of municipalities, etc. Users would also like to have overviews of specific economic sectors, information on market size and trends and forecasts.

### Survey of professional associations

The aim of the survey conducted from 19 January to 3 February 2017 was to identify the need for statistical information of Estonian professional associations and through them, the need of enterprises belonging in these associations, preferences in using statistics, interest in Statistics Estonia's products. Professional associations and chambers of commerce were invited to participate in the survey.

According to the results, those who use statistics frequently do not consider finding data difficult, but two thirds of respondents stated that finding statistics published by Statistics Estonia rather is difficult. Explanations were the following: both finding the database and finding information in the database is difficult, the use of the database is not intuitive, searching for data is time-consuming, data are not detailed enough.

More than a half of respondents used also other sources to find the necessary data: websites and databases of Eesti Pank, other state authorities and state registers (commercial register, population register) and international organisations (Eurostat, OECD, IMF, the United Nations). A third of respondents have ordered fee-charging surveys (market research, credit reports, etc.).

The following indicators published by Statistics Estonia have been used the most to analyse specific economic activities (sectors): number of enterprises, number of employees, turnover, expenditure (incl. labour costs) and average wages and salaries.

In order to get a better overview of their sector, the respondents would like to get more detailed exports data about enterprises operating in specific economic activities both by commodity chapter and country, number of active enterprises, economic indicators, etc. Respondents also asked for more up-to-date information and a current and automatically updated overview of statistical indicators of their interest. There is greater interest also in comparisons, e.g. a comparison of the main indicators of Estonia and the eurozone, of members and non-members of business associations, etc.

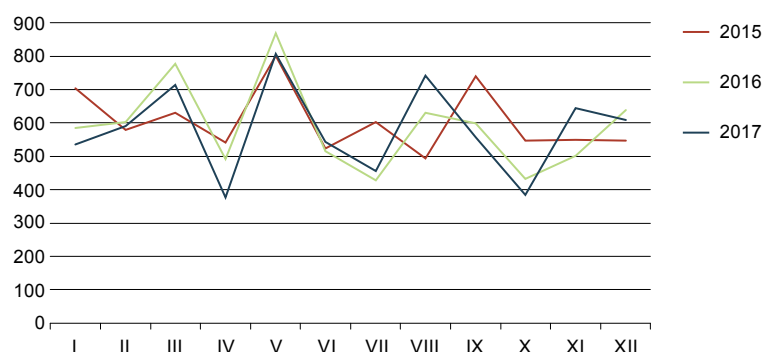
## STATISTICS ESTONIA AND OFFICIAL STATISTICS IN MEDIA, 2017

There were 6,958 media mentions concerning the activities of Statistics Estonia and official statistics in 2017, which is 2% less than a year ago. 3,068 mentions concerned Statistics Estonia's news releases and 452 mentions concerned blog posts.

### Media mentions, 2013–2017

	Total number of mentions	Average per month	Average per day	Change in total number of mentions compared to preceding year, %
2013	7,853	654	22	–12
2014	6,275	523	17	–20
2015	7,262	605	20	16
2016	7,068	589	19	–3
2017	6,958	580	19	–2

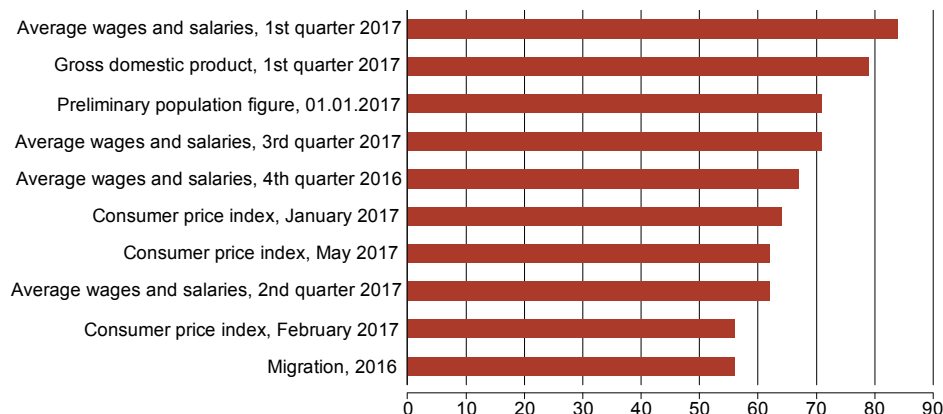
### Media mentions by month, 2015–2017



### News releases

In 2017, Statistics Estonia published 137 news releases, all of which received media coverage. According to media monitoring, each news release received 22 media mentions on average. The media was most interested in wages and salaries and the consumer price index. Media reporting on news releases accounted for nearly a half of all media mentions.

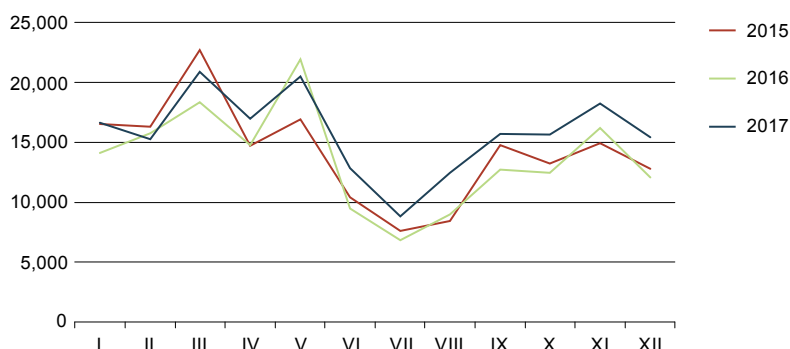
### Top news releases by media mentions, 2017



During the year, the news releases were viewed 198,500 times on Statistics Estonia's website, i.e. approximately 519 views per day (the corresponding numbers in 2016 were 163,800 and 449).



### News release views on Statistics Estonia's website by month, 2015–2017



### Articles

In 2017, three articles by the employees of Statistics Estonia were published in the media (eight in 2016). One of the three articles introduced official statistics and the aim of two articles was to rebut the erroneous interpretation of official statistics.

### Press conferences

In 2017, Statistics Estonia held five press conferences.

In January, the publication “Social Trends” was presented to journalists. The publication focuses on the coping and well-being of households. At the presentation, Principal Analyst Siim Krusell analysed the labour market position of Estonians and non-Estonians before, during and after the economic crisis. Particular focus was on the Estonian language as a factor expected to improve the labour market position of non-Estonians. Analyst Tiiu-Liisa Rummo spoke about the poverty of households relying both on the poverty indicators based on monetary income as well as those based on self-assessment. After the conference, there were 48 media mentions.

In May, a press conference on migration trends was held. Senior Analyst Alis Tammur spoke about Estonia's external migration in 2016 and Leading Statistician Koit Meres about the unregistered migration of European Union citizens in Estonia. Tiit Tammaru from the University of Tartu described migration trends in Estonia and choices in migration policy. After the presentation, there were 56 media mentions.

In July, Statistics Estonia gave journalists an overview of macroeconomic trends and changes in wages/salaries both in 2016 and in the first quarters of 2017, as well as about Estonia's position in these areas in international comparison. There were 30 media mentions.

In October, Statistics Estonia published the results of the 2016 Household Budget Survey and organised a press conference for the presentation of the results. Analyst Anu Õmblus described the main trends in the expenditure of households and Head of Methodology and Analysis Department Kaja Sõstra spoke about the size and share of compulsory expenditures in the budgets of households. After the press conference, there were 34 media mentions.

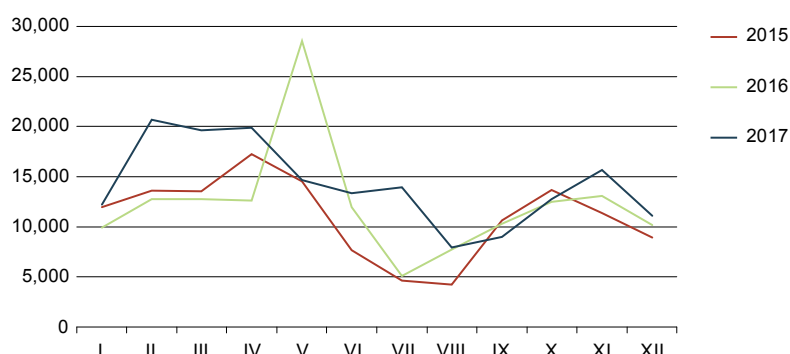
At the end of the year, Statistics Estonia published the results of the 2017 Estonian Social Survey. Leading Statistician-Methodologist Jaan Õmblus gave an overview at the press conference about the net income of households and Analyst Anu Õmblus about the relative poverty and material deprivation of households. The topic received 27 media mentions.

### Statistics Estonia in social media

#### Statistics blog and Facebook

In 2017, Statistics Estonia published 58 blog posts, which were mentioned in the media 452 times (in 2016, the respective numbers were 47 and 315). Over the course of the year, the blog was visited 170,900 times. The previous record dates back to 2016 (147,300 visits).

### Visits to statistics blog by month, 2015–2017



The most popular blog post was “Iga kuues Eesti elanik kannab neljätähelist perekonnanime” (“Every sixth inhabitant of Estonia has a four-letter family name”), written by Alis Tammur to introduce the family name section of the name statistics application. The article reached approximately 30,500 people in the social media and received 22 media mentions.

In general, social media users liked holiday infographics with short explanatory texts. This way an overview of the exports and imports of natural wood brooms compiled on the occasion of Walpurgis night, an analysis of ice-cream consumption published in summer and an infographic on bun and whipped cream production for Shrove Tuesday reached over 10,000 theoretical social media users.



In 2017, the most active contributor to the blog was Evelin Puura, who was the author or co-author of seven articles. Eve Telpt and Mihkel Servinski both wrote four articles in 2017. In total, approximately 20 people wrote articles for the blog.

#### Posts that reached the largest number of people in blog on publication day and on Facebook in five working days, 2017

Title	Author	Number of people <sup>a</sup>
Iga kuues Eesti elanik kannab neljätähelist perekonnanime (Every sixth inhabitant of Estonia has a four-letter family name)	Alis Tammur	30,500
Volbriöö! saab sõita peamiselt importluuaga (On Walpurgis night, mostly imported brooms can be used)	Evelin Puura	12,500
Jäätiseekspordi kõrghooaeg on suvel (Ice-cream exports peak in summer)	Evelin Puura	11,200
Shrove Tuesday (infographic)		10,600
Naene mehe abi, mees naese tugi (Woman helping the man, man supporting the woman)	Kaja Sõstra	9,400
EV 99: Pingeridast pingevabalt (Republic of Estonia 99: Relaxedly about rankings)	Mihkel Servinski, Marika Kivilaid, Greta Tischler, Triinu Lukas	7,600
Naiste ja meeste elu Eestis ja mujal Euroopas (Life of women and men in Estonia and elsewhere in Europe)	Eve Telpt	7,000
Millele kulub lastega perede raha? (Expenditures of families with children)	Tiiu-Liisa Rummo	6,700
Hõissa pulmad! (On weddings)	Eve Telpt	6,600
Noore inimese päev (A day in a young person's life)	Kutt Kommel	6,400

<sup>a</sup> The number of blog readers and Facebook users who received Statistics Estonia's posts directly or via friends.

Statistics Estonia has had a Facebook account since 2010, which is used for mediating Statistics Estonia's news releases, blog posts, publications, job openings and news by Eurostat and statistical organisations of other countries. At the end of 2017, Statistics Estonia had 3,480 Facebook fans.

In September 2015, Statistics Estonia reactivated its Twitter account, which was last used at the time of the 2011 PHC to post news. In Twitter, automatically generated messages are posted to notify of the publication of news releases and blog posts. In Twitter, Statistics Estonia has 1,437 followers.

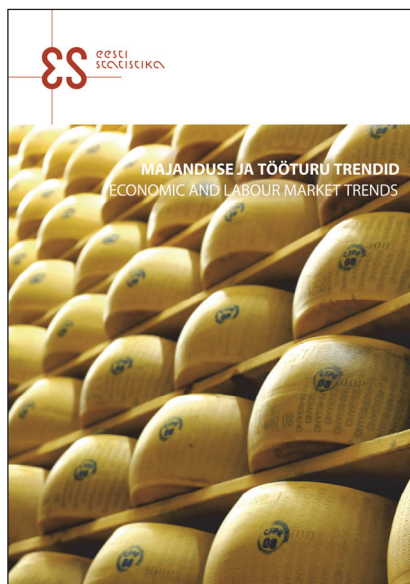
In 2017, Statistics Estonia started using LinkedIn. Here, Statistics Estonia's job openings are published and materials related to data collection, survey results and methodology are disseminated.

## PUBLICATIONS IN 2017

Eesti Statistika Kvartalikirj. Quarterly Bulletin of Statistics Estonia

Minifacts about Estonia 2017

Majanduse ja tööturu trendid. Economic and Labour Market Trends



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