

Modernizing dissemination of statistics in Estonia and use of PC-Axis

Statistics Estonia's strategy for 2008–2011 has set a goal "From data collector to information service provider". Therefore, modernization of dissemination is one of the most important tasks and the developments in dissemination of statistics have to be an integral part of our work process. The information space and users' needs are changing continually. In order to keep up with changes, statistical institutions have to be able to adapt.

Dissemination principles

Despite a continuous need to make changes and develop dissemination, we should have solid principles which are always followed to guarantee credibility, no matter how innovative and creative the dissemination of statistics is. The main dissemination principles of Statistics Estonia are as follows:

- all users must have an equal access to official statistics: the dissemination dates of official statistics are announced in advance in the release calendar and no user can have access to official statistics before other users;
- the results of all surveys specified in the list of official statistical surveys approved by the government should be disseminated in the form, way and at the time described in the list;
- distribution of official statistics is always impartial and transparent: neither political comments nor comments made by governmental authorities can be added to official statistics;
- statistical information is first published in the statistical database. In case a news release is published based on the same data, the information provided in the relevant news release is simultaneously published in the statistical database;
- official statistics are always disseminated together with metadata in order to avoid misinterpretations and misuse. In case of public misinterpretation of official statistics (by media, politics, etc.), Statistics Estonia draws users' attention to that and in more serious cases publishes extra explanations in the media;
- the data disclosed in the statistical database are used in news releases and statistical publications. This guarantees that the user gets identical data from all channels;
- official statistics are public goods, the production of which is financed from the state budget — therefore official statistics are free of charge. User of statistical products covers only direct expenses related to distribution of statistics (for example, price of a printed publication). Therefore, all products of Statistics Estonia are available on the website free of charge. This guarantees that all users have an easy access to official statistics;
- all materials published and information letters (mass-mail) sent to clients are subject to editing. It helps to avoid misinterpretations caused by poor communication and makes statistics better understandable for users.

Statistical database

In order to make available all statistics which are subject to publishing, there is a statistical database on the website of Statistics Estonia starting from 2001. The database uses PX-WEB from the PC-AXIS software family.

Before publishing the database, Statistics Estonia tested various tools for browsing statistical tables on the Internet and decided to rely on PX-WEB. The main advantages of PX-Web are as follows:

- we have been using PC-Axis since 1998 for presentation of statistical tables on CD-ROM;
- simple structure of PC-Axis file;
- easy to adapt and maintain the software;

- convenient to create, update and edit tables ;
- a good solution for the presentation of multidimensional tables ;
- experience of neighbouring countries (all Nordic countries) in using the software;
- existence of the PC-AXIS reference group to facilitate further development of the product .

At the moment there are 2,819 tables in the database. The database consists of statistical database and regional development database. Currently , we are working to integrate the two databases into one. The reason for that is to make finding of data easier for users. The data published in the regional development database are also available in the statistical database and users find it confusing. On the other hand, it is difficult to find regional data in the statistical database because of a great amount of tables. The purpose of integrating databases is to create one single statistical database, where the tables containing regional dimension are easily recognizable by the corresponding icon.

The database is divided into four main subject areas — economy, environment, population and social statistics. Data on the Population and Housing Census and Agricultural Census are presented separately. Each statistical subject area is divided into sub-areas. All areas and sub-areas are presented in the alphabetical order. The data in our databases are presented in the form of statistical tables marked with unique codes. The list of tables concerning a particular sub-area is presented in the alphabetical order of table codes. The list of variables and some values of variables are presented under the title of the table. The number of values of a variable is presented in brackets.

Any selected table can be presented on screen and/or downloaded in different formats (PC-Axis, Excel, etc.). Data can also be presented in the form of diagrams or by using Google Maps or Google Earth. The functionality of saved queries was taken into use in 2008. Saved queries enable to update a table without selecting the table and values of variables in the database. Saved queries can be viewed and changed. To save and use queries, the user has to be registered and logged in (a user does not need to register for traditional use of database). When logging in next time, the user can find saved queries on screen for viewing and downloading. Statistics Estonia has also used the saved queries functionality to query the statistical database for information needed for publishing some of the newest online products on the website.

For every table in the statistical database, the respective metadata (terms and definitions, description of the methodology used, information about the classifications used, references to other sources and contacts) are presented under the heading Definitions and Methodology.

Next to the public statistical database which provides a very large amount of information and possibilities of use, Statistics Estonia started to offer some simpler statistics in 2009 in the form of [pre-defined tables](#), which present the most widely used indicators of statistical domains selected in cooperation with our statistics departments. Retrieval of the source data for pre-defined tables is carried out directly in the statistical database by using the saved query functionality. This guarantees that the tables are updated automatically alongside the update of database. All tables are provided with the code of the corresponding table of statistical database. This way, users of pre-defined tables can easily find more detailed information in the database: to do it, only the corresponding code needs to be entered into the search engine of the database and one can open the table.

In addition to the aforementioned pre-defined tables, a selection of Eurostat's pre-defined tables has been translated into Estonian and published on our website under the heading International Statistics in order to help users who need international statistics.

Statistical database survey

In order to collect suggestions for the development of statistical database and to study respondents' opinions about the user-friendliness of the database, we arranged a user survey in 2008. The survey was carried out only on the Web. A window with the introductory text and a link to the web questionnaire (in Estonian and English) was displayed to users who had entered the database. During the period 20.05–3.06.2008, 553 users filled in the questionnaire which included seven questions.

The questions covered the following topics: the frequency of database use, the simplicity of finding information, the need for presenting ratios in addition to absolute numbers in the database and the need for database-centred training.

As a result of the survey, we found out that about fifth of the users use statistical database several times a week, about a third of users — a couple of times per month, and a third — more seldom. First-time users accounted for 16%. To the question about the simplicity/complexity of finding data, 40% of respondents answered 'one way or the other'. About a third considered finding data 'rather easy' or 'easy', about a quarter regarded it 'complicated' or 'rather complicated'. The majority of users had found at least part of necessary data, 7% had not found necessary data at all.

The survey also studied the necessity for training database users. Most respondents preferred to use user instructions set out on the website (53%) and the interactive guide (demo tour) (32%). Over a quarter of respondents mentioned that they did not need training.

In general, many respondents were satisfied with the database: it was rated good and user -friendly (no need for modifications), the possibility to make tables and save them as Excel tables was rated very good. A third of respondents made suggestions for improving the database. It was mostly recommended to improve the search system, and it was also suggested that the database structure should be made easier as it often does not correspond to the logic of a regular user. 69% of respondents suggested that key ratios should be included in the database. Some respondents suggested that a more visible link leading to the database should be added to our website. Based on the suggestions, several improvements have already been made or planned for the future.

Developments in the dissemination of statistics

Statistics Estonia observes the needs of the users of statistics on a regular basis and takes the received feedback into account in developing dissemination. As a result, several innovations have been made during recent years. Since dissemination has been moving into the Web, Statistics Estonia made all its publications available on the [website](#) starting from 2009. Until then, most analytical publications were available only in printed format. Now users can download all publications free of charge, which definitely increases the use of statistics even though the circulation of printed publications was reduced quite remarkably in 2009. But together with the number of electronic version users, the use of publications has increased, too.

Due to the electronic dissemination of publications, notification of the release of publication can be ordered on the website. Persons who have ordered such a notification will be informed via e-mail about the release of publication. A similar service has been offered in case of news releases from the year 2002 already.

Statistical publications: less tables, more analyses

In general, Statistics Estonia has reduced the number of publications during recent years. In 2000 we published 58 and in 2009 only 16 statistical publications. Taking into account that all numerical data are available in the database, there is no need to copy them into printed books. Now, our statistical publications contain mostly analytical articles and overviews. The only exception is the Statistical Yearbook and some pocket-sized reference books. The Yearbook comprises most important indicators of all statistical domains. However, the overviews of statistical domains have also been developed to be more analytical. In 2010 the Yearbook will be in a new format (B5 instead of A4), the content has also been improved, greater emphasis is laid on textual parts and on the socio-economic overview of the previous year.

The principle "less tables, more analyses" has been implemented in view of developing publications of all statistical domains. Due to that, from the year 2009 onwards, Statistics Estonia has suspended publication of the Monthly Bulletin of Estonian Statistics. Instead, a new publication Quarterly Bulletin of Statistics Estonia was launched. It contains mainly analytical articles on more topical themes of various fields, the time series of main economic and social indicators and news picks from the field of statistics (the picks are usually based on fresh news releases of Statistics Estonia and Eurostat).

One of the most popular statistical publications is pocket-sized reference book "Minifacts about Estonia" (in different languages), which has been published since 2003 in cooperation with Estonian Ministry of Foreign Affairs who distributes this pocketbook in embassies around the world. In 2009 the

pocketbook got a new look and the content was also improved. Before that it contained only tables. But now, in addition to tables, every chapter gives a short overview of the situation and trends in the corresponding domain of statistics. Also, photos have been added in order to make the appearance of the publication more attractive.

Visualization of statistics

Price statistics, in particular the change of Consumer Price Index (CPI), is a statistical domain which attracts the interest of a wide range of users. To give everybody a chance to calculate the change of CPI of a period which poses interest, Statistics Estonia created and published the [CPI calculator](#) in 2009. This calculator enables to calculate the monthly, quarterly or yearly changes of CPI. The source data of the calculator are retrieved directly from the statistical database using the saved query functionality. This guarantees that the calculator always uses updated data. The results of the calculation are displayed to the user both numerically and graphically. The calculator is available on the website.

In cooperation with our German colleagues, Statistics Estonia created and published this year an interactive [Population Pyramid](#), which presents population change in Estonia since 1990 and projections up to 2050. The Pyramid is available on the website and it displays two population projection variants created in 2006. Technically, the Pyramid uses SVG graphics or Flash animations depending on the features available in the user's browser and the source data of the Pyramid are compiled manually in the required format.

New dissemination channels

Social networks are gaining popularity in communication and marketing and the use of them shows a growing trend in Estonia. For example, there are already more than 200,000 Facebook users in Estonia, many people write or read blogs. In order to move with the times and reach the largest possible number of persons taking interest in statistics, Statistics Estonia started to use the possibilities of modern media for dissemination of statistics. We opened accounts on [Facebook](#) and [Twitter](#) and launched [statistics blog](#) in 2010. Information on these sites is provided in Estonian. In addition to that, we have made our publications and presentations of our employees available on [SlideShare](#).

The main purpose of using social media is to reach the people who are users or potential users of statistics and to promote official statistics and Statistics Estonia. In Estonia the use of social media has become more and more popular among different companies; also government agencies have their own Facebook sites and blogs. We find it quite important to follow this trend. For Statistics Estonia, the use of modern media enables to alter its formal and conservative identity and make it look more innovative, friendly and open.

In case of **blog**, we have also an important internal aim: to enhance the employees' capacity to communicate statistics. The blog offers a good possibility to publish brief analyses and overviews in a more informal format. Such a more flexible way to disseminate statistics, besides news releases and publications in case of which the release calendar should strictly be followed, will hopefully motivate statisticians.

How have we been doing so far? We made the blog public this year (preparations for that started half a year earlier). We have set a goal to display two new posts per week and so far we have accomplished that. The blog posts include articles based on our employees' presentations in different seminars, articles written specially for the blog and introductions of our publications. The blog visiting statistics reveal that the number of persons interested in our blog increases month by month: 2,000 visits were recorded in February; more than 2,600 in March and over 3,000 in April.

On **Facebook** we disseminate Statistics Estonia's news releases and the news releases of Eurostat, OECD and our neighbour countries. In addition to that, we also promote our publications and blog posts. In the future we intend to arrange quizzes about statistics (for example, to mark the World Statistics Day). The aim is to keep the Facebook site active and give our fans a reason to visit it. At the beginning of May, Statistics Estonia had 130 fans on Facebook.

Twitter was taken into use by Statistics Estonia during the preparations for the pilot Census of the 2011 Population and Housing Census. Its aim is to disseminate Census-related information and gather

the persons interested in the Census and population-related statistics. There are more than 270 REL2011 followers on Twitter. In addition to Census-related information in Estonia and other countries, exciting links to population-related and social topics are published there, too.

We promote the above-mentioned new information channels on our website. Besides that, links to these new channels are also added to the e-mail signatures of our employees, especially of the persons involved in marketing activities and communication with the media. In addition, we have referred to the social media channels in promotional e-mails intended to advertise our publications. We also notify journalists of our new blog posts.

Since we have been using modern media less than a year, it is too early to make conclusions about the effects. However, during the first four months of 2010, the number of media reflections has increased about one third compared to the same period of previous year.

Promoting statistics to respondents

Besides the users of statistics, respondents also comprise a very important target group for statistical institutions. The quality of statistic depends largely on respondents' motivation to deliver correct data. A basis for their motivation is knowledge of the necessity for statistics and understanding of the importance of correct data. In order to increase the respondents' motivation to submit their data, probably one of the most effective measures is to guide them to use statistics. The more respondent s use statistics, the greater is the chance that they are concerned with delivering the ir data. Therefore, Statistics Estonia pays special attention to the dissemination of statistical information to respondents. We have created a possibility to deliver statistics to the respondents via our electronic data collection environment eSTAT. Currently, the respondents, who use eSTAT for submission of their data, can receive through this channel the financial key ratios of their enterprises, which we calculate specially for them. In addition to that, links to the products and services of Statistics Estonia are displayed in eSTAT to make finding of statistics easier. At respondents' training courses, also presentations on the availability of statistics and use of statistical database are given and the feedback received has been positive.

Conclusion

Statistics Estonia has made several substantial improvements in the dissemination of statistics during recent years. The keywords for us have been 'electronic dissemination' and 'expansion of the selection of dissemination channels' in order to reach more people. Use of statistics shows a growing trend in our society and the media's interest in statistics has remarkably increased in the past few months.

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