

CENTRAL STATISTICAL BUREAU QUALITY GUIDELINES



2007



CENTRAL STATISTICAL BUREAU OF THE REPUBLIC OF LATVIA

QUALITY GUIDELINES

**RIGA
2007**

Abbreviations used

CSB	Central Statistical Bureau
EU	European Union
ESCP	European Statistics Code of Practice
ESS	European Statistical System
Eurostat	The Statistical Office of the European Communities
IS	Information Systems
ISDMS	Integrated Statistical Data Management System
IT	Information technologies
SIK	Catalogue of Statistical Publications
VEIKS	Unified Classification System for Economic Information
TQMS	Total Quality Management System
VSIP	State Programme of Statistical Information

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INTRODUCTION

The mission of the Central Statistical Bureau is to provide domestic and foreign data users with timely, precise, complete, comprehensible and internationally comparable statistical information on the economic, demographical, social and environmental phenomena and processes of Latvia by applying contemporary solutions of information technologies and accumulated experience in the sector.

In order to ensure higher quality to a maximum extent from both ethical and professional aspect, national statistics similarly to the Community statistics must follow the principles of impartiality, reliability, relevance, cost-effectiveness, statistical confidentiality and transparency.

Quality Guidelines of the CSB is an informative document describing the CSB and the main aspects of its activity: stages, methods and organizational principles of producing the national statistics, policy of data protection and dissemination. The purpose of these Guidelines is to promote the implementation of the CSB's operational strategy by involving in this process every employee of the CSB, developing the communication with society and extending the knowledge of every interested person – respondent, data user and all society – about the activity of CSB.

Section 1 of this document reflects the organizational structure of the CSB and legal aspects of its activity, and Section 2 describes quality characteristics and lists key legislation. Section 3 describes the process of producing statistical data: starting with identification of data demand and elaboration of data collection project, then continuing with methods of data collection, processing and analysing and finishing with data publication. Section 4 reveals to the reader types of data dissemination, while Section 5 sets out measures of data protection: administrative, technical and organizational measures. Section 6 comprises the policy of data revision that explains reasons for changing the statistical data that have been previously published. Section 7 reflects the dialogue between the CSB and society, and data users.

Quality Guidelines of the CSB were developed within the framework of a twinning project. The members of the Quality Working Group and Quality Steering Group were involved in the preparation of this document. We are especially grateful for contribution and support to:

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Quality Guidelines of the CSB will be constantly updated and the latest version of them will be always available on the Web site of the CSB www.csb.gov.lv/Kvalitate.

1. DESCRIPTION OF THE CENTRAL STATISTICAL BUREAU

1.1. Operational Mandate

A fundamental document governing the official statistics and activity of the CSB is the Law on Official Statistics of the Republic of Latvia prepared and adopted in compliance with the legal provisions and standards of the 17 February 1997 European Council Regulation No. 322/97 on the Community statistics (this regulation is informally referred to as the Statistics Law of the European Union).

The Law on Official Statistics sets out:

- main tasks of the official statistics;
- state institutions that deal with the official statistics;
- functions, rights and funding procedure of the CSB;
- forms of statistical observations and observation methods;
- procedure for submission of the state statistical information;
- liabilities, rights and responsibility of respondents;
- provisions for use and dissemination of the state statistical information;
- conditions of statistical confidentiality and liability for failure to comply with them.

The Regulation No. 994 “By-Law of the Central Statistical Bureau of Latvia” issued by the Cabinet of Ministers on 30 November 2004 defines the objective of the CSB’s activity, establishes functions, tasks and rights of the Bureau, structure of the Bureau, procedure for ensuring the rule of law in the Bureau’s activity and reporting.

On 16 December 1999 the Saeima adopted the Law “On Population Census”. This Law is the legal basis for population censuses, and it states that the population census must be performed at least every 10 years in Latvia.

In order to fulfil the requirements of Articles 4 and 5 in the Law on Official Statistics, every year the Cabinet of Ministers issues the Regulations on National Programme of Statistical Information that comprises the official statistics – all kinds of the most significant statistical information, which is collected and compiled by the CSB, ministries and other state institutions, and is available to the information users in a published form or by making requests for collecting the information to the responsible institution. The National Programme of Statistical Information provides the substantiation for work performance, content of the statistical information, identifies information sources, the responsible institution and frequency, methods for summary data collection and available sets for development of the statistical data.

2007. Since the beginning of 2007 the CSB has to comply with 245 Regulations of the European Parliament and Council or Commission, Commission decisions, EU Directives and other EU legislation.

1.2. Organizational structure

The Central Statistical Bureau is a direct administration body subordinated to the Ministry of Economics and is the main performer and coordinator of the official statistical work in the country. The CSB is responsible for organization of the statistical work and authenticity of the data it has produced by summarizing the information obtained from respondents and other data sources.

The official statistical system is territorially decentralized in Latvia. The CSB consists of a central institution located in the capital city and data collection and processing centres located in towns and administrative districts of Latvia.

Performance of the CSB's basic functions – production of the statistical information – is provided by 5 departments: the Price Statistics Department, Agricultural and Environment Statistics Department, Macroeconomic Statistics Department, Social Statistics Department, Business Statistics Department, as well as two independent divisions: the Mathematical Support Division and Statistical Methodology and Organization Division. Collection of the statistical data from respondents is carried out by the Central Data Collection and Processing Centre and four regional Data Collection and Processing Centres, three of which are located outside Riga.

Performance of support functions in the CSB is provided by four departments: the Administrative Department, International Project Management and Financial Department, Information, Publishing and Printing Department, Informatics Department, as well as several independent divisions.

At the beginning of 2007 the CSB system had 508 permanent positions. Almost a half (47%) of positions is civil servant positions. The CSB system also employs approximately 100 free-lancers – interviewers, price registering clerks, technical employees etc., as well as temporary employed experts for implementation of different international projects. Regional structural units employ 20% of the permanent employees.

Employees of the CSB have high level of education. At the beginning of 2007 72% of employees in the central body of CSB and 51% of employees in regional structural units have obtained higher education, 35 employees have master's degrees and three employees – doctor's degrees in sciences.

2. QUALITY IN STATISTICS

The CSB operates in compliance with principles stipulated by the European Statistics Code of Practice¹ that comprises the independence standard of the European Statistical System, provides further guarantee for good operation of ESS and ensuring reliable statistics.

The process of the CSB's statistical work takes place also according to the basic principles of the United Nations Official Statistics.²

2.1. Quality criteria

In the European Statistical System the quality of statistical data is assessed according to six quality criteria: relevance, accuracy, timeliness and punctuality, accessibility and clarity, comparability, coherence. These criteria are included also among the ESCP principles.

1. Relevance is the degree to which statistics meet current and potential users' needs. It refers to whether all statistics that are needed are produced and the extent to which concepts used (definitions, classifications etc.) reflect user needs.

2. Accuracy in the general statistical sense denotes the closeness of computations or estimates to the exact or true values.

3. Timeliness and Punctuality

Timeliness of statistics reflects the length of time between their availability and the event or phenomenon they describe.

Punctuality refers to the time lag between the release date of data and the target date on which they should have been delivered, with reference to dates announced in some official release calendar, for instance, laid down by Regulations or previously agreed among partners.

4. Accessibility and clarity

Accessibility describes the practical circumstances and conditions of collecting statistics that are faced by users of statistics - channels of data dissemination³, data ordering procedures, time of order execution, price policy etc.

Clarity describes the information space in which the statistics is delivered (tables, diagrams, maps and other illustrative materials, metadata – definitions, explanations, documentation, information on the data quality and use restrictions etc.).

¹ In Brussels, 25.05.2005 COM (2005) 217 final, COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL on the independence, integrity and accountability of the national and Community statistical authorities, RECOMMENDATION OF THE COMMISSION on the independence, integrity and accountability of the national and Community statistical authorities.

² unstats.un.org/unsd/methods/statorg/FP-English.htm.

³ Data dissemination channels – publications, files, CD-ROM, data on the Internet etc.

5. **Comparability** aims at measuring the impact of differences in applied statistical concepts and definitions on the comparison of statistics between geographical areas, non-geographical domains, or over time.

6. **Coherence** is conformity of data that are collected from different data sources, but describe the same event or phenomenon.

2.2. European Statistics Code of Practice⁴

ESCP was adopted by the Statistical Programme Committee on 24 February 2005 and approved by the European Commission on 25 May 2005. The objective of ESCP is to increase trust in statistical institutions. It can be achieved by proposing institutional and organizational measures, as well as increasing the reliability and quality of statistics and promoting application of the best international statistical principles, methods and practice in all official statistical institutions of the European Community.

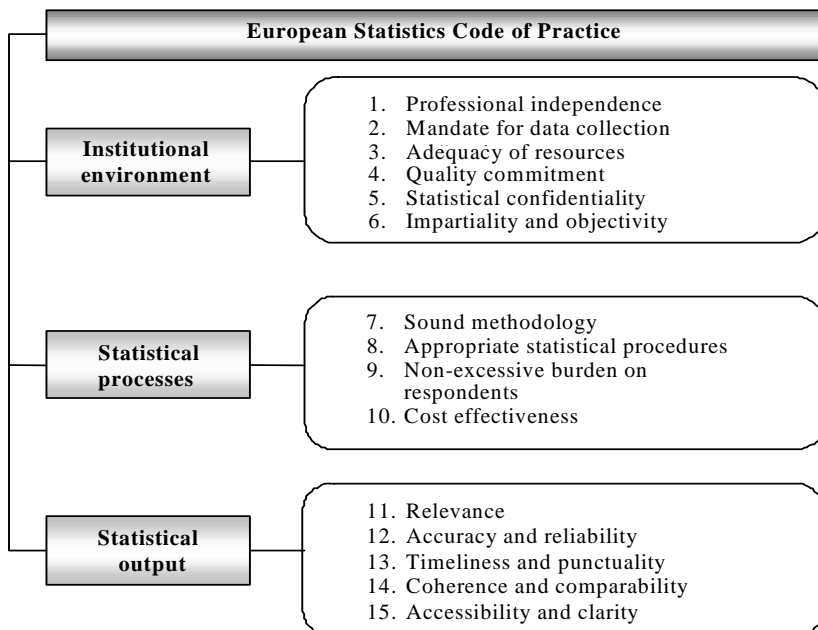


Figure 1. Sections and principles of the ESCP.

⁴ www.csb.gov.lv/espik

ESCP includes certain requirements for the statistical institution and other national institutions that produce and disseminate the European Community statistics. ESCP consists of 15 principles that are grouped in three sections (see Figure 1).

1) Institutional environment. It is characterized by institutional and organisational factors that have a significant impact on the effectiveness and credibility of a statistical institution producing and disseminating European Statistics. Issues of professional independence, mandate for data collection, adequacy of resources, quality commitment, statistical confidentiality, impartiality and objectivity are related to the institutional system.

2) Statistical processes. The European and other international standards, guidelines and the best practice must be applied in collection, organization, processing and dissemination of the official statistics. The reliability of the statistics is enhanced by good administration⁵ and efficiency. In this relation sound methodology, appropriate statistical procedures, non-excessive burden on respondents and cost-effectiveness are significant factors.

3) The produced statistics. It must comply with the needs of users, European quality standards and needs of the European institutions, governments, research institutions, companies and society. Therefore the issues of statistical relevance, accuracy and reliability, timeliness, coherence and comparability in all regions and countries are important. The statistics must be easy accessible and comprehensible.

2.3. Quality policy of the CSB

One of the CSB's activities is to introduce the basics of the Total Quality Management System – to identify statistical and organizational processes and develop their descriptions in compliance with requirements of the quality management system. The fundamental idea of the quality management system is to promote complete satisfaction of wishes and needs of data users to a maximum extent by continuous improvement of the statistical institution's activity.

Introduction of TQMS was started in 2006 within the framework of twinning project "Introduction of TQMS in the CSB" (Project No. 2005/017-495-04-02 "Administrative Capacity of the Central Statistical Bureau of Latvia", twinning contract LV/2005-IB/FI-01") from which resulted the following:

- training of the CSB's employees on quality issues in the field of statistics has been implemented;

⁵ Approach of good administration usually comprises such elements as: accountability, transparency, involvement, equality, justice, capability and competence, responsiveness to people needs.

- the structure of the CSB's quality report used for describing the statistical surveys of the CSB has been developed;
- the survey of statistical data users on the quality of the CSB's data has been conducted;
- the main processes have been defined (see Figure 2):
 - Fundamental processes – basic activity of the institution – processes of statistical information production, client service and implementation of new development projects.
 - Auxiliary processes – management and support processes that exist only for supporting the institution's basic activity. The result of these activities does not reach data users (for example, accountancy, legal services, provision of the IT infrastructure, repairs and maintenance etc.).
- survey on the satisfaction of statistical data users has been conducted;
- Quality Guidelines of the CSB have been developed;
- a technical specification for the TQMS documentary basis has been elaborated (the data basis will be generated within the framework of service contract “Documentation Storage of the Total Quality Management System” (project No. 2005/017-495-04-02 “Administrative Capacity of the Central Statistical Bureau of Latvia”).

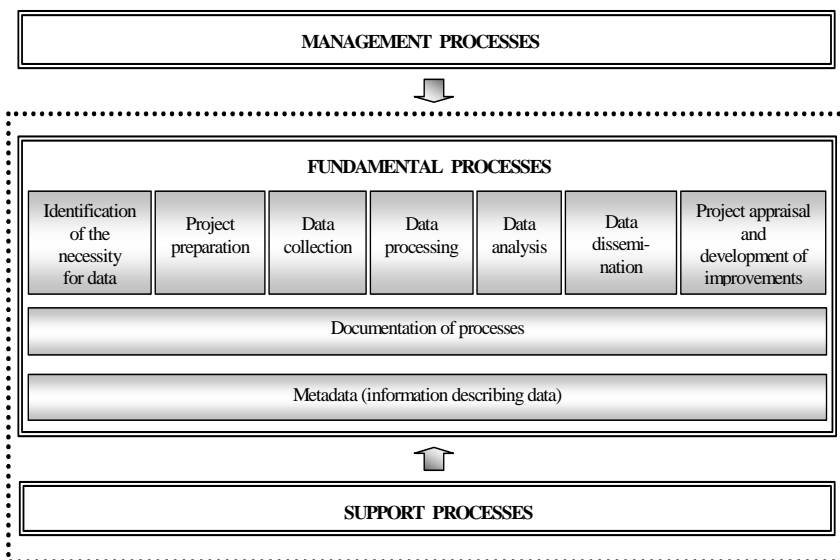


Figure 2. Scheme of the CSB's processes.

In 2006 a small-scope twinning project “Introduction of a Balanced System for Definition and Maintenance of Strategic Aims in the CSB” (project No.

2005/017-495-04-02 “Administrative Capacity of the Central Statistical Bureau of Latvia”, small-scope twinning contract LV/2005-IB/FI/02TL). The aim of this project is to improve management of statistical processes and product quality, and strategic management, to increase the efficiency of internal processes and results taking into account the good practice of the balanced method for mapping strategic aims.

3. PRODUCTION OF OFFICIAL STATISTICS

3.1. Identification of data demand

Clarification of data users' needs in the country is done by preparation of annual National Programme of Statistical Information, within the framework of which the development and degree of detailed elaboration of statistical indicators is coordinated with the most significant information users.

In order to provide the analysis of satisfying data users' needs, every two years a survey of statistical data users is conducted, which allows to identify the problematic issues and respectively make the necessary improvements.

Data users can express their wishes also by writing letters or visiting the Web site of CSB⁶.

3.2. Project preparation

The project means any type of collecting statistical data: surveys (to obtain statistical data about companies, persons and households), and calculations.

3.2.1. Project objective

The aim of project is set by the demand for a certain type of information. The branch of national economics, periodicity of data collection, variables, definitions and classifications used are determined according to the specificity of the demand.

3.2.2. Statistical classifications

Classification is a systematized division of objects in specific categories, groups, subgroups or other units depending on the similarity or differences of their characteristic criteria. Codes granted to specific objects enable to group the respective objects on any of classification levels.

The nomenclature is an exhaustive and systematized list of objects, where an identification code that replaces the title of object is assigned to every object of the nomenclature.

⁶ www.csb.gov.lv

The Regulations on the Unified Classification System for Economic Information issued by the Cabinet of Ministers establish a new structured system⁷ – list of classifications and nomenclature use of which provides the standardization of the economic information on a national level and its circulation among the state information systems on national level, the EU and international level.

VEIKS includes classifications and nomenclature the use of which provides classification, comparability and circulation of the economic information in a particular economic space:

- in the territory of Latvia – **national** classifications and nomenclature developed for the national needs. European Union and international classifications and nomenclature are also used on the national level, if national versions of these classifications or nomenclature have not been developed;
- in the European Economic Area - classifications and nomenclature of **the European Union** developed by the European Union institutions;
- on the global level – **international** classifications and nomenclature developed by international organizations.

The above mentioned Regulation identifies also the state administration institutions responsible for the development of respective classifications and nomenclatures, their adaptation, translation, coordination, maintenance, linkage with other classifications and nomenclatures and transition from the old versions to the new.

3.2.3. Censuses and samplings

In order to produce statistical data, the CSB uses different data collection methods, including:

- censuses or complete surveys;
- sampling surveys.

Population is the object of statistical surveys that consists of one or several elements (for example – individuals, households, companies). The aim of statistical surveys is to calculate the values of indicators characterizing the population in survey. These population indicators basically depend on indicators that characterize every element of population. Values of the population indicator can be calculated from the values of element indicators.

For example, the population in survey is all permanent residents of Latvia on 1 January 2007, the population element is any permanent resident of Latvia on 1 January 2007, and the characteristic indicator of this population is the average

⁷ Statistical classifications and nomenclature are divided in 3 groups: 1) national classifications and nomenclature; 2) EU classifications and nomenclature; 3) international classifications and nomenclature.

age on 1 January 2007. The average age of population can be calculated, if the age of every population element on 1 January 2007 is known.

Theoretically the simplest way to calculate the values of population indicators is finding out (clarifying, measuring) values of all indicators of population elements. This way precise values of population indicators can be theoretically calculated. This type of questioning all population elements with a purpose of obtaining values of characteristic indicators of every element is called population census or simply census.

Census is one of methods used by the CSB to conduct statistical surveys. Census, as a population survey method, is often expensive (from several aspects – in terms of funding, time, burden on elements (respondents)).

Census is used as a population survey method in cases, if:

- it is necessary to obtain fundamental information on the whole population – for example, population and agriculture censuses that are organized every 10 years;
- the population in survey is small – for example, companies in a specific sector.

The **sample-based survey** is a more rational (cheaper, faster and reducing the burden on respondents) population survey method. This method is used in almost every survey, where the surveyed population is too large to obtain information on every element of population.

The sample-based survey is a method that allows to question only a part of population elements. It is not possible to calculate precise values of population indicators by using the sample-based survey, but it is possible to obtain statistically justified assessments of population indicators and evaluate the error caused by the sampling effect (sampling error). It enables making conclusions about the accuracy of assessment on population indicators.

The CSB uses two types of sampling – random samplings and fixed or non-random samplings.

The CSB mainly uses random samplings. The substantiation for random sampling is based on the theory of probability. Population elements are included in the sampling by using the random (lottery) principle that provides for good representation of population. Several sampling designs (plans) exist:

- simple random sampling;
- stratified random sampling;
- systematic sampling;
- cluster sampling;
- two-stage sampling;
- multi-stage sampling.

The selection of sampling design is determined by the population in survey and features of their characteristic indicators, available information on population, questioning (measuring) method, volume of resources provided for the survey.

Non-random samplings are based on inclusion of particular population elements in the sampling. Several types of non-random sampling are established, but the CSB uses only the cut-off samplings. Cut-off samplings are used, if the population in survey contains elements that prevail over the other elements of population. The inclusion of these prevailing population elements that exceed particular margin due to their size allows to make sufficiently accurate conclusions about the whole population.

3.2.4 Questionnaires

Questionnaires are used for both: households and businesses surveys. They are intended to collect structured information from respondents.

The data quality is influenced by the content and design of the questionnaire. Clear questionnaires facilitate the work of both respondents and the CSB. By studying the most significant changes in social and economic processes questionnaires are assessed, and the necessary amendments or adjustments are made.

The CSB observes the following principles in the **development** of questionnaires:

- questionnaires have a single title page that contains the following elements:
 - CSB's logo;
 - title and index of the survey;
 - legal justification for data collection;
 - registration code of the questionnaire;
 - submission deadline;
 - details of respondents;
 - contact information.
- the questionnaire consists of one or several sections with accentuated and easily perceivable titles;
- when including the same questions in different questionnaires, they are formulated in the same way;
- guidelines for respondents or an instruction (manual) for interviewers is prepared for filling in the questionnaire.

The CSB perform frequentative **testing** during the process of developing the questionnaire:

- check the questionnaire's content, its compliance with the established requirements;

- finds out the opinion of respondents and experts (testing of experts, cognitive⁸ testing of respondents);
- usually the pilot survey⁹ is carried out before launching a new survey;
- draft questionnaires of companies in different sectors are sent for testing also to the main data users (scientists, ministries, associations) and respondents;
- a full cycle of questionnaire processing is tested, including entry of data, control of encoding, correction of text etc.

In order to optimise sources of producing statistical indicators and burden on respondents, the CSB has established a system (laboratory) for testing questionnaires.

During the stage of project preparation all further project processes are planned (data collection, processing, analysis and dissemination), they are described in detail through the next chapters of these Guidelines.

3.3. Data collection

3.3.1. Household surveys

The field work¹⁰ of a survey can be started, if the following is ensured:

- questionnaire is provided and approved;
- validation algorithms are developed¹¹;
- data input programme is prepared and tested;
- sample design is made;
- lists of respondents are prepared;
- the time period for performance of field work is defined;
- an instruction (manual) for interviewers is prepared;
- training and selection of interviewers is conducted;
- if the survey is organized for the first time – information for mass media, that is placed on the CSB's Web site, is prepared;
- informative letters concerning participation in the survey are sent to respondents.

⁸ A small group of respondents, including representatives of different age and professions, participates in the cognitive testing. Respondents are asked to answer the questions of poll or survey and comment on them. Thus the information on how respondents understand the particular question and how they make decision on the possible answer is obtained.

⁹ Pilot survey – a survey that checks the survey questionnaire and its processing procedure by involving small number of respondents.

¹⁰ Field work – survey of persons at their places of residence or via telephone.

¹¹ Validation algorithms – formulas for the mathematic and logic data control.

When engaging the interviewers, their language and computer skills, as well as their reliability and communication skills, are assessed. The training of interviewers is organized in case a new survey is started or if significant amendments have been made to the existing survey or an additional module has been supplemented to it. Representatives of the responsible structural unit, experts in the field related to the survey, interviewers and their supervisor participate in the training. The training of interviewers includes:

- information on the aim of survey and data use;
- a detailed questionnaire review;
- information on actions in different situations during the performance of survey;
- tests for examination of knowledge acquired by interviewers.

3.3.2. Statistical surveys of companies

The survey can be started, if the following is ensured:

- the questionnaire and guidelines for filling it in are prepared and approved;
- description of metadata in the Integrated Statistical Data Processing and Management System is prepared;
- validation algorithms are developed;
- sample design is made;
- lists of respondents are prepared;
- the time period for data collection is defined;
- guidelines for data collectors¹² are prepared;
- instruction of data collectors is conducted;
- informative letters concerning participation in the survey are sent to respondents.

3.3.3. Use of administrative data

The information from the existing national administrative registers, data bases and information systems is used for the statistical data collection. If the selected source of administrative data completely corresponds to the definitions used in statistics and data quality requirements, it allows to reduce the burden on respondents and costs of collecting statistics, obtain additional opportunities for testing statistics, as well as improve the data quality. Currently the CSB uses data from more than 95 sources of administrative data. The most significant CSB's cooperation partners are: State Revenue Service, State Treasury, State Land Service, Office of Citizenship and Migration Affairs, State Employment Agency, Financial and Capital Market Commission, the Bank of Latvia.

¹² Data collectors – employees, who are engaged in work with respondents: collection of information via statistical questionnaires, input and processing of raw data.

Starting to use the administrative data, the CSB:

- verifies the legal basis of data adoption, compliance of data quality and definitions with statistical aims;
- conducts methodological surveys in relation to opportunities and restrictions of data use;
- performs technical preparatory works for the data adoption;
- provides for connecting of administrative data to the statistical data bases.

In statistics administrative data are used for planning of sampling, calculation of statistical indicators and aggregates, data processing, analysis etc.

3.3.4. Data collection methods

When preparing the state statistics, the CSB uses different data collection methods. The initial statistical information from respondents – private persons (natural person, legal person with private rights or association of such persons) or state institutions is obtained by the CSB through regular (annual, quarterly, monthly) and single surveys. The CSB uses approximately 140 different questionnaires for data collection annually. The CSB obtains the statistical information from companies by the use of statistical questionnaires, but from residents - by conducting personal interviews. Every year the service of interviewers conducts 10 surveys questioning more than 70 thousand households.

The CSB offers to **companies and organizations** the opportunity to use the following types of data submission:

- mail;
- fax;
- e-report¹³ system:
 - by manual input of data in the electronic data input questionnaires;
 - by uploading a structured data file to the system;
- the respondent personally submits the questionnaire.

The respondent independently selects the type of data submission taking into account the available technologies, costs and the time period, in which the questionnaire must be submitted.

¹³ The CSB has established a system for electronic collection of statistical reports (e-report) that allows respondents to fill in and submit statistical reports via Internet, thus reducing costs of data production and accelerating data processing. At the beginning of 2007 it became possible to fill in 49 reports and more than 5 thousand respondents (approximately 15% of the total number of respondents) were registered in the system.

Surveying of residents are conducted by interviewers:

- being present at respondents' places of residence;
- over the phone.

Selection of data collection method is influenced by the volume of information to be obtained and duration of the expected interview. Interviews in presence of respondents are selected, if a longer time period is necessary for obtaining the information.

The quality of information obtained in the surveys of residents is influenced by the interviewer's skills, wording of questions and their logical sequence.

Part of the surveys of residents are conducted using laptop computer¹⁴, that enables significant increase in the quality of the produced data, because the first testing of data is carried out already during the interview. The obtained information is sent to the CSB daily through information and communication technologies that considerably reduces the time of data processing.

In order to reduce the costs of data collection, the CSB conducts centralized telephone interviews¹⁵. The duration of a telephone interview usually does not exceed 30 minutes. The training of interviewers, supervision of their work, as well as giving additional instructions in case of telephone interview is simpler than those in the case of conducting interviews in presence of residents in their households.

In conducting surveys hard-copy paper questionnaires¹⁶, in which the interviewer or the respondent himself/herself marks the answers, are still used.

3.4. Data processing

CSB uses ISDMS for data processing. It is a system based on metadata and standardisation of data processing, which in essence does not require individual programming. This system was used to process 80 statistical surveys in the begging of 2007.

Data collected by means of questionnaires which are not included in the ISDMS are processed by the CSB using especially developed data processing applications.

¹⁴ Computer assisted personal interviews (CAPI).

¹⁵ Computer assisted personal interviews (CAPI).

¹⁶ Paper assisted personal interviews (PAPI).

3.4.1. Data entry and verification

CSB uses the following ways for data input:

- manual;
- electronic (electronic data carriers and e-report);
- scanning.

Data are verified in two data processing stages: on raw data¹⁷ level (processing of individual information) and on aggregated data¹⁸ level (verifying prepared aggregates).

Data at the raw data level are verified automatically after they had been entered in the CSB data processing system where the incorrect, potentially faulty, incomplete and missing data are defined through pre-developed and pre-verified validation algorithms.

If the respondent has an opportunity or he/she has chosen to use electronic survey submission system on the Internet offered by the CSB, basic connections (mainly arithmetical) are verified already in this stage. It allows reducing the time consumed in the further data verification and correction.

CSB uses several methods for data verification at the raw data level:

- arithmetical connections;
- logical connections;
- comparison with data of previous periods;
- mutual coherence verification with other statistical questionnaires, statistical registers and administrative data.

Verification of quality of the household (persons) survey data is commenced already during the survey. Performance of the interviewers is verified by the supervisors who take part in selected number of respondents' interviews and make analyses of collected primary data. As well data analyses are made by the CSB's structural units responsible for the survey which reports back to interviewers about mistakes, if any. If the surveys are carried out by using laptops or telephone, data validation algorithms are included in the data input programme as far as it is possible.

¹⁷ Raw data – individual statistical data submitted by respondents that has not been processed (accuracy estimated, edited or analysed).

¹⁸ Aggregate data – summary of raw data.

3.4.2. Data correction and imputation

Errors identified during verification are divided in two types according to their importance:

- ones which have to be definitely corrected;
- ones which can be ignored, for they have little impact on the quality of aggregates.

Consultations with the respective respondent are frequently carried out after the error had been identified in the raw data, and, if the error is recognized, data are corrected.

Imputation is a process, which is used to produce data on the missing respondents or missing responses. Imputation methods are chosen and applied pursuant to the specifics of statistical field and the available data sources.

3.4.3. Preparation and verification of aggregates

Aggregates are made and different groupings are formed from the raw data produced and processed within this process.

CSB uses ISDMS and separate data processing applications to prepare aggregates. Aggregates are prepared pursuant to the VSIP and needs of the data users.

CSB uses similar methods for verification of aggregates to ones, which are applied in the verification of raw data. If data incoherence, inaccuracy, unexplainable tendencies and illogical changes in the data structure are identified, repeated data verification is carried out at raw data level.

3.5. Data analysis and preparation for publishing

Statistical data analysis is the final stage of statistical observations when the obtained data are processed with mathematical methods, and indicators are obtained which provide an insight into accuracy and quality of data. Results of the statistical data analysis of the previous periods are taken into account by planning new statistical studies, defining their sampling design and improving content and structure of questionnaires. If several data sources are used during the analysis, conformity and data combining possibilities of those sources are assessed.

Data analysis provides answers to the following questions:

1. Are the data sufficiently precise?
 - If the data have statistical biases, how big those biases are?
 - Do the units included in the statistical observation allow assessing target population in a sufficiently adequate manner,

- i.e., there are no significant over-coverage¹⁹, under-coverage²⁰ errors?
- What is the impact of classification, irresponsiveness and measurement errors?
 - Is the sampling amount sufficient to produce results?
 - What is the impact of the missing and imputed data?
 - What has to be done in order to prevent impact of the statistical bias and make the required information more credible and precise?
2. What is the seasonal impact on the data time-series?
3. Can the data be published in correspondence with the statistical confidentiality requirements?

CSB does not publish information on the aggregates, if it is confidential. Statistical data can be regarded as confidential, if it allows directly or indirectly identify respondents, other natural persons and legal entities (also their structural units), on whom individual statistical data are provided, thus revealing individual information.

Individual statistical information can only be revealed in cases when it is:

- information about addresses, telephone numbers and type of activity of the private persons, excluding legal persons which are not sole proprietors, and public persons;
- information on the number and composition of personnel employed by the respondent, excluding information on certain natural persons;
- information on the types of products which are extracted, processed, transported, stored, purchased and sold, as well types of services, which are provided by them;
- information on the emissions into the environment, environmental quality, environmental protection measures and use of natural resources;
- information for which a written permission for its publishing is received from the respondent.

Confidential data, which are produced only for statistical aims can be used only for statistical aims – to prepare aggregates, group data according to different characteristics and analyse socio-economic phenomena and processes.

¹⁹ Over-coverage – elements of frame population (frame population – list of elements included in the statistical observation), which do not belong to the target population (target population – list of target elements of statistical observation).

²⁰ Under-coverage – elements of target population, which are not included in the frame population.

Provision of confidentiality for information on aggregates

Information on aggregates is regarded as highly confidential, if:

- indicator of the aggregates is obtained from one, two or three statistical units (companies);
- proportion of a one statistical unit in the respective indicator accounts for 80% and more;
- total proportion of two statistical units accounts for 90% or more.

Secondary confidentiality criteria have to be followed when disseminating information on aggregates. The secondary confidentiality criteria are preparation of aggregates in such form to ensure that it is not possible to calculate indicators of confidentiality when carrying out arithmetical operations within the table or between tables or between different levels of classifications and grouping. The secondary confidentiality criterion is regarded as fulfilled, if the values of confidentiality indicators are not possible to identify through arithmetical operations. In order to ensure it, sometimes additional indicator has to be marked as confidential. A minimum value other than zero is chosen as the additional indicator.

Provision of confidentiality of individual information

CSB ensures that the individual information retrieved from respondents or other data sources is not disseminated in a way, which allows directly or indirectly identify the data subject.

CSB renders individual information to the data users, if the required activities have been carried out (hereinafter – anonymisation), in order to prevent possibilities of identifying subjects on which individual statistical data have been rendered.

CSB has developed data anonymisation methods, taking into account recommendations regarding anonymisation of the respective industry's data of Eurostat, Statistical Office of the European Communities.

The prepared new publications and changes in the content of publications of previous years are reviewed by the Editorial Council of CSB. It also makes decision on publishing concrete statistical publications and their inclusion in the Catalogue of Statistical Publications.

Any information is confidential prior to the set publishing date and time.

4. DATA DISSEMINATION

Presentation or publishing of the information retrieved within statistical observations is a public expression of activity of statistical institution which provides an opportunity for the whole society and different national institutions and organizations, as well international institutions to obtain the required information.

One of the CSB tasks stipulated in the Official Statistics Law is provision to the Saeima, national and local institutions and the general public of statistical information required for the adoption of decisions, as well as for the promotion of research and exchange of opinions. Thus statistical information produced by CSB has to be publicly available.

Publishing is understood as the placement of statistical information on the Web site or databases of the CSB, preparation of publications both in electronic and printed form according to the order of client, preparation of press releases and other materials for the general public.

When publishing statistical information, CSB considers the following main principles:

- Statistical information defined by the VSIP and held by the CSB is publicly available free of charge.
- When placing a notification on the Web site, society is being informed about the availability of statistical information, i.e., publishing of statistical surveys' results and making changes in the previously published data (data revision), as well about the preparation of publications.
- The most important statistical data, which are also very topical for the society, are being published in the press release for the first time.
- Statistical information published by the CSB is simultaneously available for all data users on equal terms.
- Data sources and other methodological information are included when publishing statistical information.

4.1. Statistical publications and catalogue of statistical publications

One of the ways for dissemination of statistical information is statistical publications. Two kinds of publications according to their content can be set out from the range of publications offered by the CSB – data publications and informative-analytical publications.

According to frequency publications are divided in the following groups:

- newsletters – publications issued more often than once a year;
- data collections – thematic publications of industries published once a year;
- yearbooks – annual comprehensive statistical publications.

Besides, CSB publishes also booklets – publications of different frequency in pocket format.

Data users are informed on the availability of publications via SIK which is available both in electronic and printed form. CSB prepares SIK in the end of a year. It comprises all publications, which are envisaged to be published next year. Separate issues of newsletters can be published also the year after the next. SIK is sent to potential clients of CSB and placed on the Web site where the timetable of publications is also available for those interested.

4.2. Press releases

CSB prepares press releases on important statistical data, which are of interest to society, on prepared publications, changes in the databases and measures taking place within CSB.

Press releases prepared by the CSB are publicly available after 13.00 on the given date. Content of the press release is confidential till the given period of time.

Preparation plan for the press releases is prepared for a calendar year.

4.3. Data requests

Any natural person or legal entity has the right to request CSB to provide information required.

An information request can be sent to CSB via mail, fax, e-mail or filling the form "Ask us" on the CSB's Web site. Information requests are registered.

The timeframe for preparing the answer is 10 working days. If additional time is required for preparing the answer, then the client is informed about it.

Principles of confidentiality are followed when preparing information. Data transmission contract is concluded regarding transmission of anonymised individual data for research work of data users, in which rights, liabilities and responsibility of data users, as well objective and deadlines are defined.

Fee for information preparation is defined pursuant to the Cabinet Regulation No. 618 adopted on 23 August 2005 "Price list for charged services provided by the Central Statistical Bureau".

4.4. Public databases

Data are published in the public databases through software of PX²¹ family.

Every Monday CSB publishes a list of new tables updated and drawn on the previous week.

Standardized methodological information is added to the tables published in the databases.

4.5. Information centres

Employees of the information centre have to explain within their competence the information, which is of interest to visitors.

Information is given also over the phone.

Recommendations and complaints made by the visitors are documented and persons who are responsible for data preparation are informed about them.

5. DATA PROTECTION

CSB provide confidentiality and protection of information given by the respondents, as well individual information received from other sources pursuant to the requirements of national legislation in force²².

In order to ensure confidentiality, the CSB carries out administrative, technical and organisational measures for protection of individual information held by it:

- measures which exclude unauthorised access to the individual data held by CSB;
- measures which have to be carried out within the distribution of information in order to prevent identification of individual information given by the respondents, simultaneously providing best possible opportunities for analysis of the results for scientific and research aims.

²¹ Statistical distribution data software through which many statistical institutions of EU member states provide an opportunity for statistical data users to facilitate access to statistical data placed on the Internet databases, sample them, draw tables, export and visualise data.

²² Section 18 of the Official Statistics Law, Sections 5 and 16 of the Freedom of Information Law, Sections 6, 7 and 27 of the Personal Data Protection Law.

5.1. Administrative measures

CSB employees operating with national statistics are prohibited to reveal any information on the respondents, which they have obtained when fulfilling their duties. This provision concerns also persons temporary involved in the collection and preparation of national statistical information.

CSB employees when starting to work sign a confidentiality acknowledgement. The head of structural unit introduces new employees with legislative acts and procedures, which regulate data protection.

Besides, the CSB has approved a List of restricted access information. It includes listing of confidential information, its justification - why does the specific information is regarded as confidential, and defines the period of time for restricted access.

5.2. Technical and organisational measures

In order to ensure protection of statistical data, the CSB carries out the following technical and organisational measures:

- CSB's premises have restricted access by using access code equipment for entrance doors. After working hours only persons having written permission of the head of their structural units, which have to be submitted to the CSB's security service, can access the said premises.
- Access to the server rooms, computer network and other communication equipment is authorised only for certain members of technical staff.
- CSB's Information Systems are secured against breaking in from external networks.
- Any software not required for fulfilment of duties is prohibited to be installed on the workstations.
- Access to data processing software's databases and administration systems are controlled through registration of users and creating usernames and passwords for them.
- Elements of IS computer network – servers, workstations, switching equipment are provided with continuous stabilized power supply. Servers are provided with backup main components, which eliminate the risk of irreversibly losing data when one of these components is down.

6. DATA REVISION POLICY

Revision is change of any previously published statistical data, irrespective of the fact whether data are distributed in electronic or printed form.

6.1. Elements of revision policy

Revision policy is an important component of good administration of statistics, which comprises the following elements:

- **revision cycle** – carrying out previously envisaged and stable revisions which are based on calculations regarding impartial and successive increase in the amount of available information;
- **revision timetable** – previously set deadlines defining when the updated data which are envisaged during the revision cycle will be published;
- **amount of revision** – previously set length and indicators of revisable time-series to be revised;
- **communication with data users:**
 - freely available description for justification of changes envisaged within revision cycle for data users;
 - clearly recognisable revised data;
 - timely introduction of the expected changes in the data to the data users or informing about the interruption in time-series in cases when revisions are connected with changes in methodology, definitions or classifications;
- **revision analysis** provides an insight into amount of the possible future revision of current data published in the first stages of the revision cycle and provides an opportunity to assess data credibility.

6.2. Planned revisions of statistical data

Planned revisions of statistical data are understood as:

- further updating of previously published data of higher aggregation level, by adding more detailed information on the aggregation level;
- revision of published data by applying seasonal adjustment method or changing the definition of reference period;
- revision of published data pursuant to the changes in the methodology or classifications.

In general, statistical data are revised pursuant to the planned revision cycle and timetable: information is stored on the errors in the data sources or calculations after data publishing till the next planned data publishing date, thus following the

planned revision cycle and timetable, as well avoiding to carry out data revision too frequently.

6.3. Unplanned revisions of statistical data

Unplanned revisions of statistical data are such revisions, which cannot be impartially connected to the previously defined revision cycle. Necessity to carry out unplanned revisions can emerge when identifying significant errors in data sources or calculations, as well in cases if methodology or data sources are changed without being planned to.

Unplanned data revisions are carried out in exceptional cases when the amount of revision according to the assessment of CSB's experts has a significant impact on the quality of remaining statistical data.

6.4. Database of data revision analysis

Information on every statistical information block included in the revision cycle is stored in the initial stage (first 3-5 years) of revision policy's operation. Therefore databases of statistical data revision analysis is established which in the further period of operation are continuously supplemented with new data.

Database of data revision analysis stores information on:

- results of revision of respective indicator (absolute values and/or growth rates) published in successive dissemination rounds;
- reasons for revisions.

In the coming years CSB plans to establish a database of Macroeconomic statistics data revision analysis for internal use.

6.5. Publishing of revised statistical data

Revised and/or further to be revised statistical data, when adding them to publicly available databases or statistical publications, are particularly stipulated or marked. It is carried out as:

- reference to revision policy or a link to CSB Web site;
- report on the amount of carried out revisions and assessment of their impact.

As the result of significant methodological changes, the revised data are published only after the introduction of most important data users with reasons for the expected revision, methodology used in recalculations, possible impact of data revision and other related information. Informing the data users can be carried out through a press release of respective content timely placed on the CSB Web site or having discussions with data users.

7. COOPERATION WITH DATA USERS

7.1. Informing data users on the topicalities

The society is informed about the current issues in several ways:

- Senior executives of the CSB frequently give interviews on the radio and television, providing comments on various topical issues in different statistical fields.
- CSB regularly organises press conferences on the gross domestic product, inflation, foreign trade etc.
- When launching a new project, CSB holds meetings and informs main statistical data users on the aim of the project, possible results and their use.
- Referring to recommendations for discussion of topical statistical issues and problems, CSB holds discussions with representatives of ministries and associations, where the ways to prepare data and methodological principles are explained.
- Annually, prior to the preparation of VSIP, seminars for data users are organised. Data users are introduced with the new activities in the field of summarization, analysis and dissemination of statistical information during these seminars. Representatives of ministries and associations, as well research staff participates in the seminars for data users.
- Seminars for data users are organised also in cases when it is necessary to inform about significant methodological changes in data summarization or data publishing policy.

7.2. Quality reports

One of the most important tasks to be carried out when improving operational performance of CSB is establishment of a unified quality documentation system in order to provide extensive, understandable, useful and comparable information on different statistical fields.

Mainly information on the data production methodology and data production methods is available in CSB publications and press releases. Different quality reports published on the Web site of CSB are prepared on several statistical fields according to request from the Eurostat.

In order to facilitate correct interpretation of data and to foster dialogue with data users, CSB develops a unified documentation system for data collection projects, i.e. a unified quality report standard where different data preparation aspects are described in detail: legal basis, methodology, sample design and sample size, data collection and processing methods, definitions etc.

Quality reports will be a significant information source both for CSB's employees themselves and also data users in order to get acquainted with the process of producing statistical data in different statistical fields and to assess quality and credibility of data.

7.3. Surveys of data users

In order to find out whether data users are satisfied with the quality of statistical information prepared by the CSB, and its conformity with the needs of data users, as well satisfaction with the quality of products and services, the CSB conducts surveys of data users at least once in a two years which serve as the basis for identification of problematic aspects.

Certain range of CSB's data users participate in the quantitative²³ and qualitative²⁴ surveys pursuant to their aim. When summarizing results of surveys, the structural unit which is responsible for the respective product or statistical field develops a detailed action plan for improvement of the respective statistical product within 3 months.

Results of the surveys are published on the CSB Web site.

²³ Quantitative surveys – surveys where numeric indicators are obtained (amount, number, size, volume etc.).

²⁴ Qualitative surveys – surveys which are carried out in order to define the attitude, perception, motivation, assessment of respondents and other factors, which cannot be expressed in figures.

INFORMATION ON THE TRANSITION FACILITY PROJECT

Project objective: Raise of administrative capacity of the Central Statistical Bureau through introduction the bases of the Total Quality Management System.

General objective: to improve quality of statistical products and processes.

Project activities:

1. Detailed assessment of the current situation in quality monitoring and quality documentation in the CSB;
2. Workshop on quality reports and indicators in statistics;
3. Study visit of CSB staff to the FSO on quality issues;
4. Workshop – “User satisfaction surveys”;
5. Seminar on general approach of quality in statistics and improving process quality;
6. Workshop on recommendations for creation of systematic method for identification, transferring, maintaining and developing the best practices;
7. Participation in the International workshop on data quality assessment methods and tools (DatQAM);
8. Launching at least two user satisfaction surveys for different target groups;
9. Formulation of adequate demands to quality in order to improve quality of products and processes ensured by CSB;
10. Seminar on quality documentation system based on Italian information system for survey documentation (SIDI);
11. Improvement of draft technical specification of CSB quality documentation repository;
12. Final seminar: evaluation of the contract.

European Union

The European Union (hereinafter – EU) comprises 27 member states, which have decided to combine gradually their knowledge, experience and resources. During a fifty-year-long EU enlargement process, the member states have jointly established an area for stability, democracy and sustainable development, maintaining cultural diversity, mutual tolerance and individual freedom.

EU has committed itself to share its achievements and values, by sharing them with other countries and nations of the world.

<http://europa.eu.int>

About the EU programme

EU programme “Transition Facility for Strengthening Administrative Capacity” or Transition Facility Programme (hereinafter – TF programme) is developed, in order to provide financial assistance to the new member states for dealing with so far unsolved issues regarding improvement of public administration pursuant to the EU rules.

Pursuant to the Article 34 of the Treaty of Accession the aim of the TF programme is to strengthen state administrative capacity by supporting measures not financed within the framework of Structural Funds. In general, the TF programme supports twinning projects and technical assistance projects of EU member states and candidate countries. In separate cases, small investments are also provided to purchase equipment required for introduction of the acquis (EU legislative framework).

In total, from 2004 to 2006 the European Commission has allocated approximately EUR 23 M to Latvia within the framework of the TF programme:

Year	2004	2005	2006	2004-2006
Funding allocated to Latvia, M EUR	11,4	7,5	3,7	22,6

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