

Guideline for “Quality Assurance” of the Official Statistics

1 Purpose

"The quality of official statistics" is a concept build on the compatibility of the users' needs, the timeliness of the dissemination, and the construability of the statistics data as well as the accuracy.

We devise this guideline as a standard guidance to promote the practices of “Quality Assurance” which aim at improving the usefulness and the reliability of the official statistics through compilation and dissemination as well as through indication, evaluation and improvement of the statistics qualities in the administrative organs (*).

(*) The administrative organs correspond to the ones prescribed in the Article 2 (1) in the Statistics Act (The Act No. 53 of 2007. Hereafter referred to as "The ministries").

2 Background

In this guideline the phrase "Quality Assurance" of the official statistics refers the premeditated and systematic application of the quality assurance activities mentioned above. As a concept it differs from other assurances such as a product guarantee, which promises to repair and/or compensate for damages when there is a defect to the product.

In the first place, “Quality Assurance” is a movement which has been promoted in the industries and the related learned societies since the 1970's. It includes activities which

(1) establish the process of grasping the needs and providing goods and services effectively,

(2) evaluate and grasp the compatibility for the needs on a continuous basis, and make improvements in those goods and services,

(3) provide reliance and a sense of security concerning those goods and services.

(Source: “Guidebook on the new quality guarantee (new edition)” edited by Japanese Quality Management Society)

The way of thinking about the statistics quality in "the Master Plan Concerning the Development of Official Statistics (*)" is based on these same ideas of "Quality Assurance". Specifically, the Master Plan prescribes the policies for reexamining and streamlining of the statistics through the continuous grasp and use of the statistics needs as well as through the evaluation of the statistics. It also promotes reexamining and streamlining of the official statistics through self-evaluation of the quality and an objective evaluation of the results. The aim is a reduction of both the respondents' burdens and the maintenance as well as the improvement of the statistics quality.

In these situations, it becomes necessary for the ministries to stimulate the adaption of the quality assurance guidelines of the official statistics.

(*) It was decided by the Cabinet on the 13th of March in 2009. Hereafter referred to as “the Master Plan”.

3 Principles

(1) The quality of official statistics

The quality of the official statistics is determined by various factors such as

(1) "Accuracy" meaning that the official statistics show the most accurate state of the society and economy,

(2) "Needs compatibility " meaning that the official statistics meet the users' needs as well as possible,

(3) "Timeliness" meaning that the produced official statistics are disseminated in a timely fashion in accordance with the users' needs and purposes.

This guideline assumes that the quality of the official statistics is determined by the elements which are defined in attached sheet 1, and the guideline regards these elements as the indexes of the quality indication and the quality evaluation. Concerning these quality elements, this guideline sets up certain universal elements which are adopted by a lot of countries and the international institutions as "major elements". It also sets up so called "supplementary elements", which are thought to be necessary for the quality assurance..

(2) The quality assurance of official statistics

The ministries improve the quality indications of the official statistics under their controls in accordance with the methodology stipulated in section 5 (depicted below). They also carry out self-evaluation of the quality and utilize the evaluation results by premeditatedly making improvements of the official statistics.

The ministries regard "the needs compatibility" as the core element and shall pay attention to the relevance between each element because public statistics are thought to be an important part of the information infrastructure for the people. Therefore it is important to compile them based on the people's needs.

In addition, this guideline is established as a standard guide for the ministries' policies. This guideline, therefore, will not prevent the ministries from implementing the current measures and the effective planned measures based on the characteristics of each statistics.

(3) The review of the guideline

This guideline will be constantly reviewed based on

(1) results of the approaches by the ministries,

(2) results of research by the related learned societies, and

(3) international trends of the approaches.

4 Coverage

This guideline covers the fundamental statistics (*1) and the general statistics (*2).

(*1) The fundamental statistics is prescribed in the Act Article 2 (4).

(*2) The general statistics are those statistics compiled based on the general statistical surveys which are prescribed in the Act Article 2 (7).

In view of the importance, the ministries give priority to the fundamental statistics in their approaches.

In addition, the ministries shall make any feasible improvement to the official statistics which are neither the fundamental statistics nor the general statistics according to this guideline.

5 Implementation methods

(1) Implementation system

The ministries invest in the quality assurance of the official statistics through systems which can secure both the objectivity and the specialty concerning the target statistics

(2) Indication of the quality

The ministries improve the indications of the statistics qualities under their controls based on "the quality

indication matters of the official statistics” as per attached sheet 2, while paying attention to the consistency with “The Optimization of Operations and Systems for Statistical Work” which was decided by the ministries chief information officer liaison conference. In addition, the ministries perform regular reviews of the contents of the quality indication

(3) Evaluation of the quality

The ministries carry out premeditated self-evaluations of the quality of the official statistics under their controls based on "the quality evaluation matters of official statistics" as per the attached sheet 3.

The ministries perform not only the evaluations of each quality element but also those from a comprehensive viewpoint while paying attention to the trade-offs between the elements. In addition, the ministries disseminate the summaries of the results from a standpoint of securing objectivity and transparency.

The Ministry of Internal Affairs and Communications (the Director-General for Policy Planning) makes use of the results of the evaluations for the approval examination based on the Statistics Act Article 9 and Article 19 and tries to reduce the burdens of the ministries.

In addition, the ministries will decide the validity of the introduction via a peer review process (mutual evaluations by the other ministries) and third party evaluation through the further consideration.

6 Systematic implementation

The ministries draw up the execution plans for quality assurance in the fundamental statistics and the general statistics and try to disseminate the summaries.

In addition, the desirable interval between these execution plans is around five years, but they should be decided in relation to the status of the ministries’ data compiling plans.

7 Others

(1) Information sharing and discussions among the ministries

The ministries continue information sharing and discussions in "the working group on the quality evaluation of statistics" in order to make progress in the field of quality assurance of the official statistics and to perform the review of the guideline based on 3 (3) mentioned above.

(2) A possession range of the statistics information before the dissemination date

Leaking the contents of official statistics before the dissemination date would betray the peoples’ trust in the overall official statistics.

Therefore, the ministries determine the range of the shared statistics information before the dissemination date by the internal regulations in accordance with “the guidance about a range and a procedure of the shared statistics information before the dissemination date “(*) and disseminate those information.

(*) The guidance was decided by the Director-General for Policy Planning (Statistical Standards) of the Ministry of Internal Affairs and Communications on 12th of May in 2010.

The Quality of Public Statistics Elements and Definitions

Elements		Definitions
Main Elements	Relevance	The relevance of official statistics, as fundamental public information to be widely and effectively used by a variety of social entities, reflects the degree to which it meets users' needs. The users are the public, national and local governments, researchers, economists, and others.
	Accuracy	The accuracy of official statistics is the degree to which it correctly describes social and economic values or conditions.
	Timeliness	The timeliness of official statistics refers to whether they are published or made available in time to be useful to users' objectives.
	Interpretability /Clarity	The interpretability/clarity of official statistics reflects the availability of the necessary information which users can appropriately understand and effectively use. The information is on methods/procedures for data collection, processing, storage and publication.
Sub- Elements	Integrity	The integrity of official statistics reflects the reliability and/or accuracy of statistics and statistics producing agencies. The integrity can be ensured by providing information on methods/procedures for data collection, processing, storage and publication. All of which are determined based on expertise and professionalism.
	Coherence / Comparability	The coherence/comparability of official statistics reflects the degree to which are coherent or consistent in concepts, definitions, and classifications among different statistics so that users can compare these statistics between regions and over time.
	Accessibility	The accessibility of official statistics reflects the degree to which both the data and basic information is made easily available to respond to users' needs.

Elements		Definitions
	Effectiveness	The cost effectiveness of official statistics reflects the degree to which they are produced by appropriate sources and methods in view of cost and burden on respondents.

Quality indication matter of the public statistics

I Investigation statistics

Common menu	Common publishing item	Content of publishing	Concrete example
1 Outline of investigation <Prior>	(1) Purpose of investigation	Description of the purpose of the statistical survey.	① Approval of the surveys purpose under Article 9 or Article 19 of the Statistics Act
			② Purpose and position of the statistical research under the Master Plan
			③ International standards and recommendations
	(2) History of investigation	Description of details, transition, history, etc. of the statistical survey.	① Details, transition, and history of the statistical survey
			② Name of the statistical survey and information on statistics concerned, investigation when statistics have been modified in the past (unification and/or reorganization)(post link here?).
	(3) Basic law of investigation	Description of the basic law that underlies the statistical research.	① Distinction of the basic statistical research and the general statistical research according to the statistical law
			② Fundamental laws other than statistical method (in some cases)
	(4) Object of investigation	Description of range of the object and the number people surveyed.	① Range of the survey.
			② Persons reported on
			③ Usage of business register
			④ Presence of repetition correcting procedures
			⑤ Use or nonuse of the administrative recorded information as business register (In some cases, outline of administrative record information)
	(5) Extraction method	Description of the extraction method in the sampling survey.	① Extraction method
			② Extraction rate
			③ Target accuracy
	(6) Matters for investigation	Description of the topics researched in the statistical survey.	① topics researched
			② Purpose for research
	(7) Survey slip	Picture file etc. of the survey sheet are attached.	① As required under the Statistics act pictures of survey sheets are published in the order of the surveys execution.
			② Picture file of survey sheet (sample)
			③ How to fill in survey sheet
	(8) Time of investigation	Description of investigation date and concrete investigation period.	① Investigation date or period
			② Survey sheet distribution and collection period
	(9) Survey methodology	Description of the survey procedure and the surveying technique etc. of the statistical survey.	① Flow of procedure and execution of survey
			② Surveying technique
			③ Administrative record information used as substitution and supplementation during research
			④ Outline of specifications, details of the quotation, and contract (only when employing a private contractor).
			⑤ Topics researched when conducting a survey under Article 15 of the Statistics act.
			⑥ Processing standards etc. regarding legal clerical work.
			⑦ Measures taken for privacy protection
	(10) (others)	Besides the above-mentioned, other items can be published depending on the characteristics of the statistical survey.	① Range of information sharing before date of publication
			② Outline of discussion on Statistical Commission (Including departmental meeting)(Even the link is possible).
			③ Outline of discussion in society concerning execution of statistical research concerned, investigation (Even the link is possible).
			④ (1) to (9) When a revision or amendment matters stated in the purpose and content of the amendment

Common menu	Common publishing item	Content of publishing	Concrete example
2 Result of investigation <When result is made public>	(1) Explanation of term	Description of the definition and the explanation of the main terms.	① Definition and explanation of terms
	(2) Outline of results	Description of the outline of the results	① Outline of results
	(3) Total and estimate method	Description of the method of estimating the data value in the sampling survey.	① Procedure for total process: outline of specifications, details of the quotation (only when private contractor has been used)
			② Estimation method
			③ Data extraction and tabulation methodology
	(4) Attention in use	Description of points that the user should be aware of e.g. structural factors can cause differences between similar data in regards to accuracy, range of error etc.	① Statistical standard used
			② Seasonally adjusted information
			③ Information on accuracy of result (recovery percentage, valid response rate, computational method, etc.)
			④ Information about the difference between preliminary and final results
⑤ Notes when comparing with other statistics (difference etc. of definition)			
⑥ Notes on other various chapters of table			
(5) Correction information	When a correction is implemented in the data after initial publication, publication of correction information such as the table of erratas.	① Correction information	
(6) Statistical table list	Publication of the list of the spread sheet etc. linked with the statistical table management system.	① Statistical table list	
		② Other published/unpublished reports	
(7) Profit use case	Publication of results of for profit use of previous survey results. Publication of estimated profit use for present survey.	① Profit use case	
(8) (others)	Besides the above-mentioned, other items can be published depending on the characteristics of the statistical survey.	① International comparison of results	
		② Comparison with past results	
		③ Information about correct/incorrect usage i.e. which parties are entrusted to make statistics?	
3 Schedule for the announcement <Prior>	The schedule for the publication of statistics is published at the latest three months before the publication day itself. The schedule is updated whenever changes	① Schedule for publications	
		② Information on statistics which are not made public	
		③ Method of publication (medium, distribution place, charge, etc.)	
		④ Range of information available before date of official publication (post link here?).	
4 Q & A <At the right time>	Description of FAQ concerning the statistical survey.	① Q & A	
5 Inquiries <Prior>	Description of the post name and the telephone number etc. of those contactpersons users with quistions should contact.	① Post name	
		② Telephone number	
6 (Information in the past) <At the right time>	Previously published information is properly marked with number of survey and year.	① Past offer information (post link here?).	
7 (others) <At the right time>	Besides the above mentioned, publication in pamphlets and posters of pictures showing the characteristics of various statistical survey forms. Timing of publication is dependent on the schedule of the various statistical surveys.	① Slogans, posters, and pamphlets, etc.	
		② Research papers	
		③ Introduction of medium which publish about statistical surveys	
		④ Information in foreign language	
		⑤ Storage method of survey results (magnetic media and electronic media, etc.)	

II Statistics that do not depend on investigation

Common menu	Common publishing item	Content of publishing	Concrete example
1 Outline of investigation <Prior>	(1) Purpose of statistics	Description of the purpose of the statistical survey.	① Purpose of statistics
			② Purpose and position of the statistical research under the Master Plan
			③ International standards and recommendations
	(2) History of investigation	Description of details, transition, history, etc. of the statistical survey.	① Details, transition, and history of the statistical survey
			② Name of the statistical survey and information on statistics concerned, investigation when statistics have been modified in the past (unification and/or reorganization)(post link here?).
	(3) Method of making statistics	Description of the method of making statistics.	① Method of making statistics
			② Procedure for repetition corrective action
			③ Procedure for use of administrative record information (in some cases, outline of administrative record information)
			④ Outline of specifications, details of the quotation, and contract (only when employing a private contractor).
	(4) (others)	Besides the above-mentioned, other items can be published depending on the characteristics of the statistical survey.	① Outline of discussion of Statistical Commission (departmental meeting is included)(Even the link is possible).
			② Outline of discussion in society concerning execution of statistical concerned, investigation (Even the link is possible).
	2 Final result or preliminary result <When result is made public>	(1) Explanation of term	Description of the definition and the explanation of the main terms.
(2) Outline of result		Description of the outline of the results	① Outline of results
			① Statistical standard used
			② Seasonally adjustment information
			③ Information about the difference between preliminary and final results
			④ Information on characteristic of result due to different method of making.
			⑤ Notes when comparing with other statistics (differences of definition etc.)
(3) Attention in use		Description of points that the user should be aware of e.g. structural factors can cause differences between similar data in regards to accuracy, range of error etc.	⑥ Notes on other various chapters of table
			① Correction information
(4) Correction information		When a correction is implemented in the data after intial publication, publication of correction information such as the table of erratas.	① Correction information
(5) Statistical		Publication of the list of the spread sheet etc. linked with the statistical table management system is published.	① Statistical table list
	② Other published/unpublished reports		
(6) Profit use case	Publication of results of for profit use of previous survey results. Publication of estimated profit use for present survey.	① Profit use case	
(7) (others)	According to the characteristic etc. of each statistical survey, an arbitrary item is properly published in an arbitrary position besides hanging to the above-mentioned.	① International comparison of result, Comparison with past result.	
3 Schedule for the announcement <Prior>	Besides the above-mentioned, other items can be published depending on the characteristics of the statistical survey.	① Announcement schedule	
		② Information on statistics which are not made public	
		③ Method of publication (medium, distribution place, and charge, etc.)	
		④ Range of information available before date of official publication (post link here?).	

Common menu	Common publishing item	Content of publishing	Concrete example
4 Inquiries <Prior>		Description of the post name and the telephone number etc. of those contactpersons users with quistions should contact.	① Post name
			② Telephone number
5 (Information in the past) <At the right time>		Previously published information is properly marked with number of survey and year.	① Past offer information (post link here?).
6 (others) <At the right time>		Besides the above mentioned, publication in pamflets and posters of pictures showing the characteristics of various statistical survey forms. Timing of publication is dependent on the schedule of the various statistical surveys.	① Slogans, posters, pamphlets, etc.
			② Research papers
			③ Introduction of medium which publish about statistical surveys
			④ Information in foreign language

Quality assessment matter of public statistics

Elements		Viewpoint	assessment matter
m a i n E l e m e n t	Relevance	<ul style="list-style-type: none"> •Understand user's needs as completely and adequately as possible, and make statistics according to the user requests. •Make statistics regarding information that is indispensable for policymaking. •Collect information necessary for a statistical analysis without excesses and deficiencies. 	<ul style="list-style-type: none"> •Is there a necessity for making statistical data? •are measures taken to understand user's needs? •Are users needs appropriately reflected? •Is there a rationality process in place for matters such as investigation and the investigation cycles? •Is a review conducted corresponding to the change in socioeconomic circumstances etc. ?
	Accuracy	<ul style="list-style-type: none"> •The final value of the statistics should be as close to a true value as possible. •The approximation process of the specimen design (population information, range of the object, and sampling error, etc.) and the results must be appropriate on accuracy. •The statistics should be made in such a way that sampling error's etc. become as small as possible. 	<ul style="list-style-type: none"> •Is the design of the statistical survey appropriately based on statistical theory etc. •Is the execution of the statistical survey done accurately and appropriately? •Are the definitions of the statistical standards and the terms used suitable? •Is the setting of the investigation system suitable?
	Timeliness	<ul style="list-style-type: none"> •After having assured that the necessary quality has been achieved the statistics should be made public in a timely manner. •Publication of statistics should follow a schedule that has been published in advance. 	<ul style="list-style-type: none"> •Is the schedule suitable for the announced date and purpose of the statistics?? •Are the schedule for the announcement etc. made public as early as possible? •Before making public a delay in the publication schedule, are all options to avoid the delay exhausted?
	Interpretability /Clarity	<ul style="list-style-type: none"> •Information on the process of the creation of statistics and statistical information and attention, etc. must be clarified. •An appropriate explanation must be given regarding the final value so that statistics might not be misinterpreted. 	<ul style="list-style-type: none"> •Are the estimate method, matters for investigation of the object population, the specimen design (extraction method, sampling fraction, and precision aimed at), and the fruiting number values, and explanations of the method of executing the investigation ect. assessed? •When the statistical standard used is different from the standard statistical method or different from international standard, etc. , is the difference explained? •When producing statistics, the metadata and how to use raw data should be payed attention to. Has this process been properly explained? •Are the ways to utilize the results of the statistical tables, as well as the main results, well known amongst the general public?

	Elements	Viewpoint	assessment matter
s u b E l e m e n t s	Integrity	<ul style="list-style-type: none"> •Statistical information relating to the preparation process (statistical data collection, processing, storage procedures, methods of publication), has to be made public •Major changes, such as changes to statistical methodology or changes related to source data, have to be made public. •Access to official statistics should be limited until they are released to the public. Procedure for accessing statistics and clearance should be clarified. •Adequate procedures should be implemented to ensure privacy protection. 	<ul style="list-style-type: none"> •Are the specimen design (extraction method, sampling fraction, and precision aimed at), the methods of estimating the fruiting number value, and the methods of executing the investigation made public? •When important changes take place, such as changes concerning methodology or the source of information of the statistics, is the discussion process made public? •Are the measures that are being taken to preserve the anonymity of the statistical data, as well as the identity of the people handling the data, being made public? •Are the privacy protection measures in place adequate? •Is questionnaire information appropriately managed? •Are measures in place to secure the objectivity of statistics secured?
	Coherence / Comparability	<ul style="list-style-type: none"> •Two or more related statistics must be made based on a common concept, definition, classification, etc. •The comparison between time series and region must be possible. •When making statistics, elements that affect the statistics, such as concepts, definitions, ranges, classifications, etc., are to be based on the statistical laws, global customs or desired outcome. 	<ul style="list-style-type: none"> •When the statistical standard used is different from a standard statistical method or an international standard, etc. , is the difference acceptable? •When the statistics method and the source, etc. are changed, is the content of the change acceptable? •If there is a discrepancy with past results, is the reason acceptable?
	Accessibility	<ul style="list-style-type: none"> •Methods of accessing statistical data should be clearly clarified as well as published.. •Statistical data should be accessible according to users requests •Information gained from the census and other surveys should serve the secondary goal of being usable for research purposes. 	<ul style="list-style-type: none"> •Is there a significant time lag between the time of publishing statistics and the dissemination to the user? •Is the list of accessible information open to the public? •Is a customer service counter/helpdesk set up? •Is promotion of secondary use of statistics encouraged?
	Effectiveness	<ul style="list-style-type: none"> •Procedures that can be automated (for instance, data catching, coding, and confirmation) must be automated as much as possible. •Keep an administrative record as much as possible. •consider the load of the person writing the publications when making statistics. 	<ul style="list-style-type: none"> •Are statistics gathered by a more appropriate method, after it has been ascertained that the same level of quality can be achieved? •Is practical use of other questionnaire information and administrative record information aimed at? •Is the respondent's load considered?