

Coordination of the national statistical service from quality perspective

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Note by Ms Anita Heinonen, Statistics Finland (anita.heinonen@stat.fi)

Abstract: The paper describes the coordination function of a national statistical office (NSO) in a somewhat decentralised national system. In Finland, the coordination task of the NSO has a long tradition and it has evolved during the time.

The paper focuses on the role and impact of coordination on the building, assuring and improving quality in a national statistical service covering the statistical process from data collection to dissemination of the results. Enabling tools, and applied methods and procedures of cooperation forms at different organisation levels with other producers of official statistics is presented. New challenges are forthcoming especially in the context of quality management.

Keywords: coordination, cooperation, official statistics, code of practice, quality criteria, quality assurance

1. Introduction

In many countries the national statistical office has been assigned the function of coordinating the national statistical system and the maintenance and enhancement of quality might be part of that task. However, in many countries the coordination role is not existing, for example, among EU countries around half of the national statistical offices have formalised relationships with other national producers according to the European Statistical Governance Advisory Board. Naturally the coordination is not necessary in fully centralised systems i.e. when the national statistical office compiles all official statistics.

Traditionally, the coordination of the national statistical system is understood as a specific task of the national statistical office aiming to coordinate statistical activities and principles to be applied by all national producers of official statistics. Today, coordination must be extended to the entire statistical process, starting with data collection right up to the release and dissemination of data. The latest economic crisis has proven that, in addition to various economic monitoring systems, quality control of statistics should receive more attention to ensure the quality and reliability of statistical data.

This paper iterates firstly some international recommendations and frameworks for the general coordination function and then especially from the point of view of quality. The main content of this paper is presenting the organisation and practices of coordination in Finland for both cases. Since the focus of this paper is coordinating quality in national

statistical system, other specific aspects of coordination as well as other coordination of other stakeholder groups are excluded.

2. Coordination of the national statistical system

The coordination and quality frameworks cited in this chapter are the United Nations fundamental principles of official statistics and the European Statistics Code of Practice, since the quality criteria and quality assurance principles for official statistics of Finland are based on them.

2.1 Recommendations and provisions

Already for a long time, the importance of coordination of national statistical systems has been recognised and recommendations on it have been formulated by many international organisations.

United Nations fundamental principles of official statistics, adopted in 1994, is a set of 10 universal principles that form a basis for a professional, robust and high-quality national system. Principle 8 addresses directly coordination of national systems and state that “Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system”.

National quality assurance framework (NQAF) with accompanying guidelines was developed within UN and released in 2012. NQAF template is a voluntary tool intended to provide a general structure within which individual country-specific national quality assurance frameworks can be developed. The guidelines are intended to help the implementation of UN fundamental principles. The NQAF-element concerning coordinating the national statistical system is presented in Annex I.

European Union’s (EU) regulations are binding legislation for the EU member states. The regulation on European statistics (n:o 223/2009) assigns to the National Statistical Offices (NSO) the responsibility for coordinating all activities at national level for the development, production and dissemination of European statistics and requires them to take the necessary measures to perform this task. The regulation does not specify what the coordination role should consist of. The regulation is being amended and in the latest draft the coordination tasks are specified as: acting as the sole contact point towards EU’s statistical office (Eurostat), responsibility for coordinating statistical programming and reporting, quality monitoring, methodology, data transmission and communication on EU

statistical actions. In addition, NSOs should produce national guidelines, where necessary, for ensuring quality and monitor their implementation and represent their national statistical system within the European Statistical System (ESS).

The EU Code of Practice (CoP) is a self-regulatory instrument for EU member states. The code was adopted in 2005 and revised in 2011. It sets out 15 key principles for the institutional environment under which statistical authorities operate, for the production processes and output of the statistics. Each principle contains a set of indicators (82 in total) helping to identify to which extent the principle has been achieved. The coordination of national statistical system is not a separate principle but embedded in many indicators of the code.

For assisting implementation of the CoP, the ESS Quality Assurance Framework (ESS QAF) was developed and the first edition was released in 2012. The QAF covers CoP-principles that are related to statistical processes and releases, and to commitment on quality (10 out of 15 principles). Activities, methods and tools for facilitating the operationalization are described by indicator at both institutional and product/survey level. The aim is to establish coordinated system of methods and tools. The QAF is a recommendation closely linked to CoP but not an integral part of it.

OECD is planning to develop guidelines on good statistical practice to accompany and detail the UN fundamental principles within the context of OECD countries. One domain could be the coordination role of NSOs in national statistical systems.

2.2 Implementation in Finland

2.2.1 Background to the coordination

In Finland, the coordination of the National Statistical Service (NSS) has a long tradition and its content has varied over time. A limited coordination mandate of Statistics Finland (SF) was stated by law already in 1970. In the 1970s, SF was responsible for e.g. drawing up a development programme for the NSS, which the government then ratified. The three-year development programme contained a list of all the different authorities' development projects related to statistics, and an account of their necessity and costs. The planning document partly remained in paper form only, since it could not be implemented for resource reasons. The Statistics Finland Act (48/1992) was enacted in 1992 and it prescribes a mandate for coordination in which the aim is the development of the NSS

together with other authorities. Hence in the early 1990s, SF's coordinating function was altered and consequently the coordination practices had to be essentially revised.

The first Statistics Act was enacted in 1994 and it provided for coordination and general objective of the statistical service. The current Statistics Act (280/2004) names SF as the general authority within the NSS. It states further that "the objective of this act is to ensure the availability of reliable statistical information required in social decision-making and planning and in fulfilling obligations under international statistical cooperation by harmonising and rationalising the principles and procedures applied in the collection, processing, use, release and storing of data, to promote the observation of good statistical practice in the National Statistical Service ...". In the latest amendment of the act last year, a provision on professional independence when performing tasks directly connected to developing, producing and disseminating statistics was added as well as that the authorities compiling statistics shall operate independently, objectively, reliably and cost-efficiently, and ensure the protection of statistical confidentiality.

SF is the general statistical authority by virtue of law whose main tasks include the direction, development and coordination of the entire NSS in cooperation with other central government authorities. In addition, SF is responsible for the international coordination of the NSS and acts as the national authority responsible for the ESS. Tasks also cover coordination of the application of the Statistics Act and the preparation of general classification standards for the statistical service.

SF promotes the rationality and service orientation of the statistical service by providing statistical services for the rest of the NSS such as training in statistics, classifications, guidelines and statistics production, methodological and interview services.

The same coordination forms, methods and tools are applied as far as possible in the coordination of production for national and ESS purposes.

2.2.2 Actors and cooperation forms

The NSS of Finland is a network in the field of statistics covering all producers of official statistics. As the producers are independent government authorities or partly government funded institutions the coordination is based on mutual interest and cooperation and joint operational objectives and principles. The functioning of the network is characterised by impartiality, independence, as well as efficiency and service ability. The objective of the activities is an efficient, consistent and of high quality statistical service and statistics

production which meets the users' needs. Aim is that official statistics appear to the customer as an unified and high quality system despite the fact that each producer of statistics is responsible for the production and development of their specific statistics.

NSS comprises SF and 15 other institutions included in the producers of Official Statistics of Finland (OSF). OSF comprises around 260 sets of statistics on 26 different topics. SF compiles around three-quarters of the official statistics. Producers of official statistics are:

- Four statistical authorities defined by the Statistics Act: Statistics Finland, the Information Centre of the Ministry of Agriculture and Forestry, National Institute for Health and Welfare and the Finnish Customs. These agencies have the right to collect data for statistical purposes by virtue of the data supply obligation prescribed in law.
- Nine other authorities (central government agencies producing statistics)
- Three other producers (units outside state budget).

Out of 16 OSF-producers, 10 produce European statistics, and there is one authority that compile European statistics, but does not belong to OSF-network. In addition, the Bank of Finland produces statistics but does not hold the position of a statistical authority.

SF with the help of the **Advisory Board of OSF** promotes quality, unity and uniform statistical service and the realisation of the main lines of policy for the development of NSS. It acts as a joint forum for all authorities producing OSF-statistics in order to advance the development policies of official statistics and the objectives of the national level coordination of the ESS. Activities are based on quality, reliability and cooperation. set up by SF. The Board was established in 2002.

The main functions of the Board is to support SF in maintaining and developing comprehensive OSF which meets the information needs of users, to issue recommendations and guidelines concerning quality, to harmonise the production processes of statistics and spread good practices, to exchange information about national and international development and cooperation, to enhance familiarity with OSF, usability of services and availability of statistics, and to maintain and develop the dissemination portal of OSF. The Board manages the OSF-brand and monitors their compliance with the quality criteria. The Board convenes around seven times a year and in addition organises few seminars and discussions on topical matters.

Around five permanent **coordination working groups** which strongly focus on coordination have also been set up on some statistical areas, such as social affairs and health, agricultural statistics, and foreign trade and balance of payments. In addition, there are well over 100 working groups on statistics production in which other producers are members, when appropriate, as well as users.

The coordination of EU statistical work at national level is important because EU matters are daily activities of all statistical authorities. The **cooperative group on EU matters in the field of statistics** is an expert group set up by Ministry of Finance, chaired by SF and consisting of experts from most of the ministries and from the three other statistical authorities. Its mandate includes adoption of Finland's positions on statistical legal acts and discussing general statistical EU matters affecting when necessary.

For the practical realisation of the cooperation between the producers of statistics, a **network of contact persons** has been set up. SF's participants in the network are the main coordinator and separate coordinators assigned for each authority producing statistics and all fields of administration. Coordinators have also been named for the producers of key register and administrative data. Correspondingly, each authority has named a statistical contact person from their own organisation. Overall, SF has a part-time coordinator for a total of 35 authorities or horizontal topics. An important task of the members of the network is to share information within their own organisation about matters covered by the coordination and to prepare joint meetings at different levels of the organisation. At least once a year an information forum is arranged for the contact person network.

Topical and significant issues in terms of the statistical service are discussed in **high-level management meetings** at the level of Director General/Permanent Secretaries. The meetings take place every few years on average. They are important in the steering of activities, ensuring a shared direction and evaluation of the relevance of statistics. The establishment of cooperation working groups, the launching of joint projects and surveys, as well as long term cooperation agreements can be mentioned as examples of issues agreed on in these meetings. Some initiatives for the centralisation of data collections or sets of statistics have been launched at such high-level management meetings as well.

2.2.3 Main methods and tools

Cooperation and coordination are supported by the **national main lines of policy** for the development of the NSS that have been prepared by SF in collaboration with the Advisory

Board of OSF. They are drawn up for a four-year period at a time, written down and published. The need for reviewing the outlines is assessed annually by SF. The current edition for years 2013–2016 was adopted in 2012.

The current **vision** states that “the NSS advances the development of the information society and realises uniform modes of operation. Producers of official statistics are known for their efficient and high-quality production of statistics that serves the needs of data users. [...] To attain this vision, producers of statistics apply the legislation on statistics and data protection, the general ethical principles of official statistics and the Code of Practice of the European Statistical System and the OSF quality criteria based on them in a uniform manner.”[...]

SF has started to systemize and harmonise **agreements between SF and other OSF-producers** in order to achieve a common, documented and transparent procedure for the arrangements. Currently, the existence of contracts and their scope varies considerably. The aim is that the agreements would follow a common structure and be comprehensive covering all roles in cooperation, e.g. responsibility for compiling certain statistics and division of work in statistics production, international cooperation and practical arrangements. The aim is that by the end of year 2015, agreements are signed with all partners in cooperation.

OSF brand is a trademark for OSF-statistics. The first publication in OSF-series was published in year 1866 (SF was established in 1865) and currently it comprises around 260 statistics. The brand is managed by the Advisory Board of OSF. The Board reviews and accepts new statistics to the brand (template describing e.g. fulfilment of quality criteria is used) as well as omissions from the brand. The conditions for the admission require, for example, sufficient level of quality and minimum quality documentation. The brand comprises regularly published key statistics on development and state of society and are produced by expert organisations in the field of public administration. They guarantee the continuation of statistics and are committed to common quality criteria.

The OSF Board issues **OSF recommendations**. Many recommendations are given on quality. In addition, recommendations have been issued on data protection (incl. exchange of confidential data between statistical authorities), statistical releases and use of languages in releases.

All OSF-statistics are presented on **OSF portal** on SF website. The portal contains general information on OSF, OSF recommendations, release calendars and links to the actual statistics released on the web pages of organisations producing them. Publishing of OSF-statistics and publications is monitored by means of continuously updated release calendars on the Internet. Each producer is responsible for its own release calendar.

The main communication channel in the OSF context is the **OSF-Ekstranet** maintained by SF. For OSF user group e.g. news, meeting documents, reports, minutes, information on events and trainings can be found. In addition to OSF, the channel contains material for ESS user group, typically high-level meeting documents and minutes of ESS meetings.

In addition to the annual forum of OSF contact persons, **ad hoc events on topical issues** in the field of statistics are organised. These events are usually open to everybody working in the authorities concerned.

For many years, SF has offered **training** to both statistical and other authorities producing statistics, as well as to the users of statistics. The in-house training course, Training Programme in Statistical Skills, was opened to all the producers of official statistics in year 2011.

3. Coordination of quality in national statistical system

3.1 Some general aspects

According to the understanding of SF, for organisations like NSOs, the best measure of quality seems to be how well the products and services fulfil the requirements of users at certain point of time.

The NQAF guidelines are in conformity with that view. According to those there are several general definitions of quality, one of the most commonly used and succinct definitions is ‘fitness for use’ or ‘fitness for purpose’. In the NQAF expert group’s glossary quality is “the degree to which a set of inherent characteristics fulfils requirements”. Moreover, they state that over the past twenty years or so, statistical agencies have arrived at a consensus that the concept of quality of statistical information is multi-dimensional and that there is no one single measure of data quality. The dimensions of quality are overlapping and interrelated and, therefore, the adequate management of each of them is essential if information is to be fit for use.

ESS quality criteria defined in the regulation on European statistics refer only to output quality. In addition, CoP defines institutional environment and processes parts of quality.

3.2 Implementation in Finland

The aim is that all producers comply with CoP and that approved procedures for quality assurance are in place for all OSF-statistics. Quality is coordinated in NSS of Finland using the overall structures and means of coordination. Starting point for coordinating the NSS is professional independence of the institutions or at least the part in which the statistics are produced. SF advocates the use of international quality frameworks or national applications of them, recommendations and best practices through discussions within Advisory Board of OSF and network of OSF contact persons and by issuing national recommendations and guidelines and providing material, training and other related events to other producers. The most important methods and tools used in the area of quality employed in the context of the general coordination of NSS are presented in the next chapter.

3.2.1 Main methods and tools

In January 2013, all Directors General of the institutions belonging to OSF signed a **quality assurance declaration** in which they committed to the principles that steer statistics production. They committed to comply with quality criteria and quality assurance of OSF, which are based on UN fundamental principles and ESS CoP. The quality assurance concerns such as the contents of statistical data, production processes and service to data users. According to the principles reliable official statistics that have been produced independently and describe Finnish society exhaustively are offered to all Finnish citizens. They also committed themselves to measure and report continuously on the quality of the statistical data.

The Advisory Board of OSF has approved an **OSF recommendation on quality criteria** that must be fulfilled and addressed in the production by all OSF. The quality criteria are a national application that is in conformity with of CoP principles covering institutional, process and product aspects. The purpose of the criteria is to develop and maintain the usability of statistics. The criteria also form the foundation for the reporting and evaluation of quality.

OSF recommendation on quality description defines how the quality of statistics should be described when publishing. It is a concise assessment of the quality, reliability and

suitability of the statistics for different purposes. Its central objective is to show how the OSF quality criteria on statistical output are fulfilled in the statistics in question. All OSF must be accompanied by a quality description relating to and published together with the actual statistics. Different versions of the description are stored.

OSF recommendation on comparability and coherence promotes the use of standard international classifications, concepts and methods. Recommendation also covers temporal comparability and time series within a particular statistics. As regards coherence, main differences in concepts, population and methods in relation to other statistics on the same subject matter should be described in quality descriptions.

Quality Guidelines for Official Statistics handbook by SF outlines the principles, recommendations and current best practices of statistical production processes. They aim at improving the use of skills and competence required in the designing and implementing statistical systems by gathering the existing knowledge and best methods into common knowledge capital. The handbook comprises four main chapters: framework within which the field of statistics operates in Finland, stages of statistical production process, documenting and dissemination. The handbook is intended for the producers and users of statistics as well as for all who are interested in statistical systems and processes. The first edition was published in 2002 and has been revised in 2007.

SF's handbook on **Guidelines on Professional Ethics** is based on the ISI (International Statistical Institute) declaration on professional ethics and contain the ethical obligations towards society, customers and partners. Although the handbook is intended for SF's employees, customers and stakeholders, it is recommended for all people working in other institutions producing statistics. The first edition was published in 1993 and has been subsequently revised three times.

Quality monitoring. The mandate of the Advisory Board of OSF currently covers quality aspects of the whole statistical production process. The Board monitors the quality of statistics and their compliance with the quality criteria. The quality review carried out when the statistics is given the OSF-label is not sufficient in the long run, because the quality might change over time. In order to maintain the OSF-label, sufficient level of quality needs to be achieved continuously. From year 2010 self-assessments concentrating on specific sections of quality criteria are used as the method for reviewing, monitoring and improving the statistics. In the 2010 review, the topic was dissemination and in 2012 relevance, punctuality, reliability, reporting of metadata and correction of erroneous

statistical releases. The results and proposed improvement actions were presented and discussed in the Board. In 2013, a follow-up review of the 2010 and 2012 topics was carried out.

ESS peer reviews monitoring the compliance to CoP is being carried out during 2014–2015. In addition to the NSO, each country was recommended to include maximum three other national producers of European statistics and Finland included two previously agreed other producers in the peer review. In addition, other national OSF and ESS producers completed the light self-assessment questionnaire and provided the answers to SF. The approach was agreed in the Advisory Board of OSF. The peer review answers may be used in establishing the national situation of compliance to CoP and to the national quality assurance declaration. SF will make a summary of the answers for the Board. The follow-up of improvement actions will be decided later.

The organisation of quality management in SF comprises two groups. Firstly, the **SF quality group** of four persons (incl. “quality manager”) functions as a developer and coordinator and is responsible for communication at the office level. The group’s work cover also other producers of statistics through preparing, presenting and training quality matters in the context of Advisory Board of OSF. Secondly, the **SF quality network** includes experts from all departments of SF. The network supports the quality group, participates in preparation and implementation of quality related projects and advocates quality work and communication in their respective departments.

SF organises to OSF-organisations **training on quality** in the form of seminars and workshops etc. For example, during the past few years trainings have been held on the forthcoming ESS peer review, auditing of statistics, CoP and changing quality standards of ESS and study group on ESS QAF.

3.2.2 Some development objectives for the NSS for the next few years in the area of quality

Currently, following improvements actions have been outlined in NSS of Finland for the next few years: systemization and harmonisation agreements between SF and other producers of official statistics (ongoing), implementation of ESS Quality assurance framework and standardisation of metadata including quality reporting. The coordination of NSS works very well. However, sometimes, when extensive issues are on the agenda, e.g. changes of division of labour (centralization of statistics production) the coordination is not effective enough and additional support from ministries is needed.

4. Conclusions

The objective of coordination can be endorsed by many and quality is an essential part of coordination. The way in which it can be achieved in practice can be a challenge. Quality work is continuous improvement of outputs and operations producing them and requires comprehensive guidance of activities. The coordination is long-term work, its results are born from cooperation during long period of time.

In Finland, legislation give a basis for the coordination, although the legal mandate is quite general and leaves room the selection of cooperation forms and methods. So-called soft coordination is employed: the results of the coordination are based on common targets, close cooperation and mutual acceptance. An important milestone in the development of the coordination function was the establishment of the Advisory Board of OSF comprising all OSF-producers. The rationality of the activity and the realisation of the win-win principle are generally agreed upon. Uniform standards, procedures, tools, good practices and training are felt useful and giving real value (in terms of saving resources). On the other hand, without a wide cooperative network and the administration's ability and willingness to cooperate, the coordination could not have succeeded.

5. References

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European Statistics Code of Practice:

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ANNEX I. United Nations Template for a Generic National Quality Assurance

Framework: NQAF 1: Coordinating the national statistical system (8 April 2012)

Description:

Coordination of the work of the members of the national statistical system is essential for improving and maintaining the quality of official statistics produced by the various statistical agencies.

Elements to be assured:

At the national statistical system level

- Does a law or other formal provision establish the national statistical system, specify the members of the system and designate a coordinating body?
- When the national statistical office has a role in coordinating the national statistical system, is the role legislated or de facto?
- Do the objectives of the coordinating body of the national statistical system include: planning, implementing, coordinating, regulating and evaluating the development, production and dissemination of official statistics and ensuring their quality?
- Do mechanisms exist for facilitating cooperation among the members of the national statistical system in order to improve the performance of the system?
- Are mechanisms in place to facilitate the agreement, among the members of the national statistical system, on priorities for the production of statistics?
- Does the coordinating body of the national statistical system set the methodological guidelines for the production of official statistics, and promote the harmonisation of statistical information as well as the avoidance of duplication of work among the members?
- Does the coordinating body of the national statistical system promote the implementation of standards throughout the system?
- Does the coordinating body of the national statistical system promote the sharing of technical knowledge among the members of the system?
- Does the coordinating body of the national statistical system facilitate the identification of good statistical practices among the members and promote their implementation?
- Do guidelines exist for the exchange, among members of the national statistical system, of unit records or other data?

Supporting mechanisms:

The coordination of the national statistical system is likely to be more effectively managed if the following supporting mechanisms are in place:

- A statistical law or other formal provision that establishes the national statistical system and designates a coordinating body.
- Guidelines, methodological manuals and handbooks on recommended practices.
- Regularly held meetings for members of the system to develop statistical standards and guidelines, exchange technical knowledge, identify good statistical practices, etc. (e.g. committees, working groups, etc.).
- Training courses for members of the system to update knowledge on the contents and application of recommended standards, methodologies, etc.
- Processes for identifying and resolving cases of duplication of efforts in the production of statistics.
- Arrangements for facilitating regular and timely user-producer consultations and dialogues.
- Processes for the standardized evaluation of the quality of statistical outputs.
- Guidelines on quality management of statistics produced by outsourced agencies.

Source: <https://unstats.un.org/unsd/dnss/docs-nqaf/GUIDELINES%208%20Feb%202012.pdf>