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Improvements in Communicating Methodology in Statistics Denmark

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1. Introduction

In recent years, better communication of methodology has been a high priority at Statistics Denmark. It has been partly a process pushed by demands from users, partly as elements of general improvements in our communication - especially on our website and our Quality Declarations. A more open strategy with regards to communicating errors and corrections has also been implemented, supplemented with a more proactive strategy with regards to communicating new methodology by informing the press and other users in advance. I will describe some of these initiatives below and give an assessment of the response from the users of the more open approach, e.g. with regards to communication errors.

2. The basic principles of communicating methodology

Statistics Denmark strives to operate in an open and fully transparent manner and has an abundance of material describing our underlying methods and concepts behind the statistics. The methodology is presented in many ways and different communication channels in the form of:

- A. "What-documentation" – the content of statistics
 - Quality-declarations and quality reports, concepts, variables, categories and codes (classifications)

- B. "How-documentation" – how we produce the statistics
 - Management: Business Case, project plan, status, evaluation etc.
 - Work-processes: Workflows, user-guides, process descriptions etc.
 - IT: Requirement-, design-, test-, maintenance-documents etc.

Statistics Denmark also strives to live up to the principles in the European Statistics Code of Practice adopted by the European Statistical System Committee. In this context it primarily involves Principle 6 (6.3 and 6.4) about impartiality and objectivity:

- 6.3: Errors discovered in published statistics are corrected at the earliest possible date and publicised.

- 6.4: Information on the methods and procedures used is publicly available.

Living up to these principles is a challenge, however, as the material describing methodology is extensive and highly complex. Statistics Denmark communicates the methodology behind the statistics by means of a variety of formal channels:

- Quality declarations (database)
- Descriptions of classifications (reports)
- Methodology descriptions (reports)
- Times (description of data, records, variables, etc.)
- High Quality Variables
- Database of terms
- Publications and newsletters

The documentation is primarily produced by *the subject matter units*, which are also responsible for keeping the documentation of the statistics updated.

In Statistics Denmark, the division *Research and methods* is responsible for managing guidelines and supporting the subject matter unit when forming and maintaining quality declarations.

The division *Communication Centre* is involved in assuring that methodology is properly communicated to the press and other main users of our statistics. The *Communication Centre* is also more directly involved and responsible for the database of terms, and the chapter *Terms and glossary* in the Statistical Yearbook.

3. Challenges in communicating methodology – and new initiatives

As mentioned earlier, Statistics Denmark has an abundance of material describing the underlying methods and concepts of the statistics. It is an ongoing issue to improve the systems and the content, both for the producers of methodology and for the users of the documentation systems.

Users of statistics have different needs with regards to documentation and span from highly specialized researchers, to journalists, students and international organizations.

Previously, the primary users of methodology have been specialists, e.g. researchers. However, less specialized users such as journalists and members of the public are showing growing interest in the quality and content of the statistics – perhaps the economic crisis and the awareness of the importance of statistics have had an impact on this phenomenon.

The growing competition from providers of data other than the national statistical agencies also leads to a growing demand for high quality in communicating statistics and methodology in high quality and easy to access for all users.

Below, I will describe some of these initiatives taken to meet the demands of more users, with regards to initiatives on the website, the Quality Declarations and the so called High Quality Variables:

www.dst.dk: New subject pages

www.dst.dk has been rebuilt and now has a more subject-oriented structure. This enables the non-specialist to get an easier overview of the methodology behind the statistics. Each subject is briefly described and contains an overview of the latest trends in the statistics. The pages also include definitions of the central variables in the statistics from the database of terms. It is also possible to find a link to the Quality Declarations from the subject pages.

The subject-oriented pages have in some cases been supplemented with videos describing methods that describe both the content and construction of the statistics (“what” and “how”). The videos can be viewed at the website, and are also used as supplements to articles by the electronic news media, e.g. the unemployment statistics:

<http://dst.dk/da/Statistik/emner/arbejdsloeshed/arbejdskraftundersoegelsen-arbejdsloeshed.aspx>

Review of the Quality Declarations

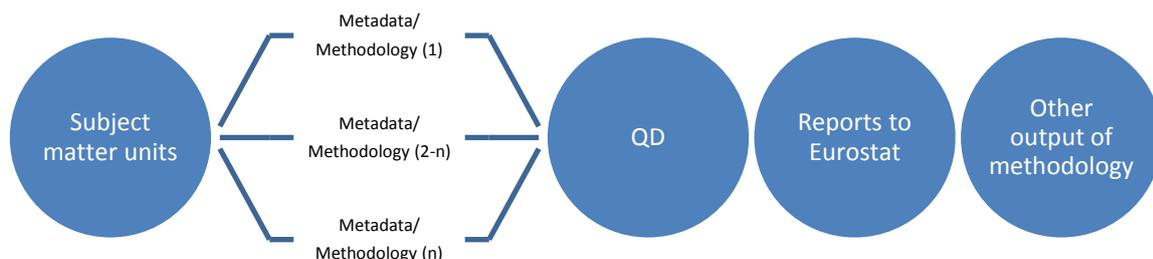
Each statistical product in Statistics Denmark is described in a **Quality Declaration (QD)**, which is basically a document containing a full description of the methodology behind the statistics. The QD has been systematically reviewed in 2012, with regards to structure and content. This work continues in 2013 and 2014 with a focus on:

- The user: How are our statistics used and does the documentation support this use?
- Internal efficiency: documentation must be updated in the same central database and data must be easily accessible internally.
- EU requirements: quality declarations must be substantive and the technical design must meet EU requirements - thus we avoid doing the same work twice.

In the process of reviewing the QD, the needs of all users will be taken into consideration, both the needs of internal and external users:

- The providers of documentation (subject matter units)
- The communicators of documentation (web and communications staff)
- The documentation specialists (quality staff)
- The users (international organizations, specialists, journalists, students, etc.)

Previously, the QD was one long list of information. In the new structure, the content will be presented in modules, which makes it possible to customize the output presented or forwarded to the user (the user interface or report) depending on the needs of the user. This is at the same time helpful for the providers of communication, who will have to report to one system, but at the same time serve many users.



The development of the Quality Declarations is still in process, but one important new element in the QD is the development of a front page, presenting an overview of the main issues of the respective statistics, with regards to comparability, content, accessibility and timeliness. From this front page, deeper links are provided to more advanced descriptions of the quality aspects for the specialized user. This is a major step forward, as the QD now better meets the demands of all users.

The introduction of a front page will also enable a more news-oriented approach. It will be possible to highlight important constraints or vital issues in the methodology. Previously, this type of vital information may have been overlooked in the huge amount of information.

Furthermore, the review of the QD integrates the demands associated with the technical and statistical standards in the European Statistical System.

High Quality Variables

So-called high quality variables have been produced in recent years in Statistics Denmark, to meet a request from researchers for detailed documentation of the variables that are most used. Since the project started more than 500 high quality variables have been produced. The work on high-quality documentation is coordinated by the Research and Methods division, which also forms part of the external steering committee set up for the quality documentation project. The project is partly financed by external funding.

The quality assurance of quality documentation includes an internal and external assessment. All high quality variables must go through both ratings. The external quality assurance is assessed by two external reviewers. These evaluators are people with a special insight into the specific statistical area concerned. In the internal quality assurance, the documentation is reviewed by an internal assessor and a linguistic reviewer from *Communication*.

4. Communicating errors and changes in methodology

Statistics Denmark adopted a new policy with regards to the communication to the users about errors and corrected figures in 2006. See also the paper on the subject titled *How to use mistakes to improve credibility* presented by Statistics Denmark at the UNECE Work Session on Statistical Dissemination and Communication in 2006.

The new policy was introduced partly as a result of an unfortunate experience, when criticism was received in connection with the publication of corrected figures. Some major users argued that our website should be used much faster and more actively to inform users of the problem. We judged that the criticism was deserved and decided to improve matters.

The policy requires a prompt reaction, when errors are detected, with regards to the correction of the errors and instant communication about the corrections to the users, on the front of the website, and by e-mail to subscribers of the release, who will receive a copy of the corrected publication. This policy has proved to be a success, and it is our impression that it may have contributed to an improvement in the credibility of the institution.

Another thing adopted six years ago was a systematic reporting and mapping of errors, containing:

- Type of statistical publication at fault

- Seriousness of the error (blemish, minor or serious error)
- When was the error discovered and by whom?
- Type of error and responsibility (error in links, dates, calculations, dissemination or other types)
- Cause(s) of error
- When was the error corrected?
- Actions taken to correct the error (online, reprint, e-mail and so on)
- Actions taken to prevent future errors

This mapping has also proved useful and is used by the entire organization. It gives an idea of the magnitude of the problem. It increases staff members' focus on errors and how to avoid them. The number of minor errors such as wrong dates, spelling mistakes, wrong links, etc. has been reduced significantly. With regards to the more serious mistakes, they have increased slightly, however, in relative terms that number has remained constant as more news releases are produced now. This must also be viewed in the context of a situation of higher work pressure, as a result of fewer staff and a higher number of releases.

With regards to communicating changes of methodology, we have integrated a more proactive approach. This implies a mail to important users or news media containing a short briefing of the new methodology the day before the release of figures. This service is especially highly valued by the electronic media, launching our figures on the internet only seconds after the release.

5. Challenges in communicating methodology – summing up

Summing up, the most challenging aspect to communicating methodology is not lack of methodology or the communication to our users, but the coherence, quality and uniformity – in and across the various systems. The challenge is to find ways to make the processes more effective and to establish a more consistent system across documentation systems.

This should be done by the support and cooperation of the different professions in the organization, e.g. documentation specialists, statisticians, semantic specialists, etc. The new project in Statistics Denmark reviewing the Quality Declarations and the entire setup of our documentation systems will hopefully address these challenges and meet the demands of both providers and users of documentation even better in the future.