

Overview of Quality Management of Official Statistics - benefits and requirements

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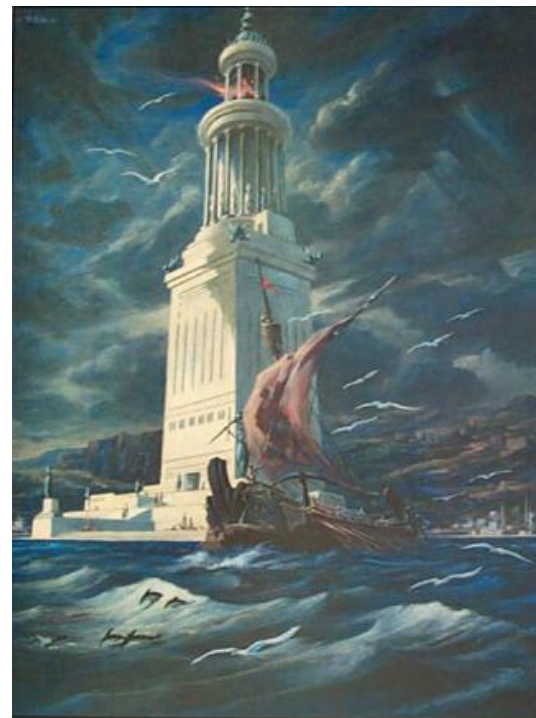
What is official statistics?



- Provided by public bodies / state
- Describe the demographic, social and economic situation:
 - quantitative or qualitative information on all major areas of citizens' lives, such as economic and social development,^[1] living conditions,^[2] [health](#),^[3] [education](#),^[4] and the environment.^[5]
- Common reference frame for discussions
- National Statistical System (NSS)

Why are we here?

- Because all good decisions rely on facts
- Provide the basic facts on society – a common reference point
- Basis for **democracy** and **economy**
- A lighthouse in the Sea of Information



What is **quality** in official statistics?

- Good or bad quality?
- **Trust** is the key
- Without trust and user satisfaction: No value
- UN Fundamental Principles of Official Statistics (1993; 2014)
- European Statistics Code of Practice (2005; 2011)
- EU Quality Assurance Framework (2013)
- OECD Quality Framework (2012)

Countries' obligations to the OECD

- Provide statistical data and metadata
 - Comply with OECD standards
 - Ideally from one national data provider
 - In reality many
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- Can a user meaningfully divide one figure (e.g. total sick insurance expenditure) by another (e.g. population)?
 - And compare between countries?
 - Can users find the same figures in National web sites?

OECD Quality Dimensions



- Relevance
- Accuracy
- **Credibility**
 - Confidence & Trust
- Timeliness (& punctuality)
- Accessibility
- **Interpretability**
- **Coherence**
 - **Coherence across datasets/ domains**
 - Coherence over time
 - **Coherence across countries**
- Cost-efficiency

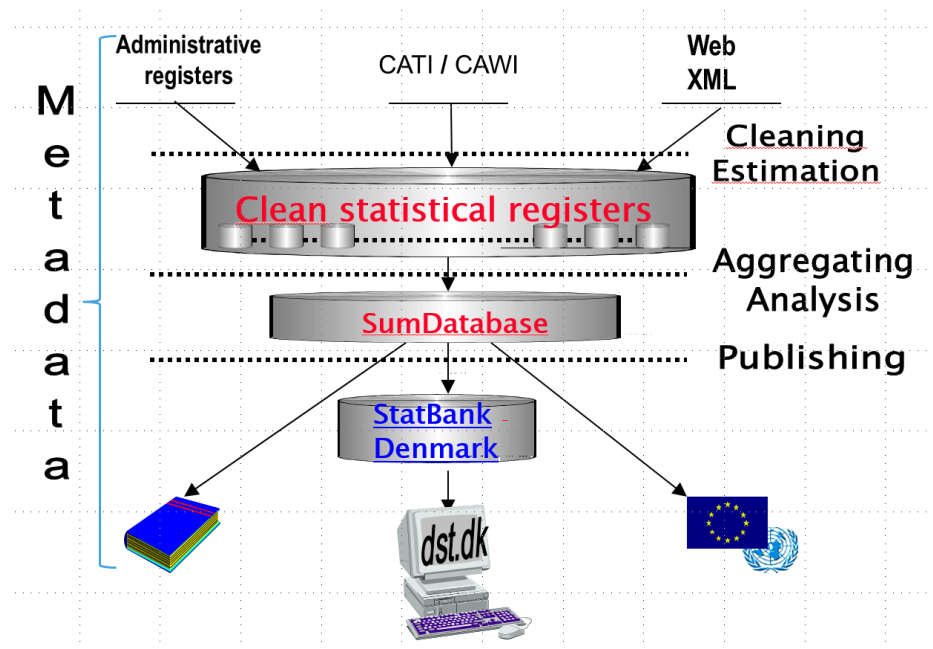
Statistical cooperation in EU

- Denmark member of EU since 1972
 - Moving from cooperation on common surveys
 - towards cooperation of common statistical systems
- Tools for cooperation
 - Parliament- and Council regulations
 - Committees, working groups and task forces in Eurostat



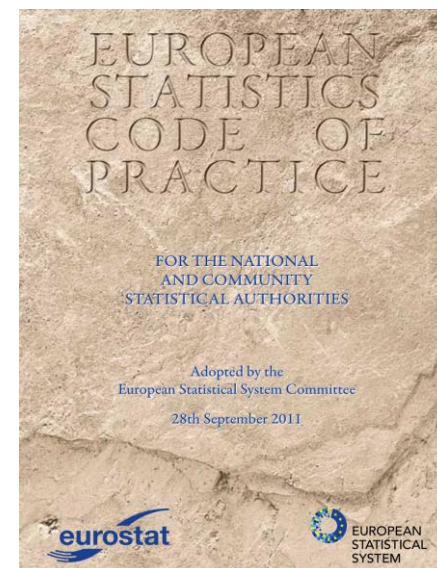
Statistical System

- Statistical infrastructure
 - Basic registers
 - Common classifications
 - Common statistical methods
 - IT-tools
 - Dissemination
 - Metadata
 - etc.
- Statistical input
 - Surveys
 - Administrative sources
- Statistical outputs
 - Database
 - Web site
 - Reports to international organisations



Quality assurance in the European Statistical System

- Crisis in the European Statistical System 2005
 - Fraudulent statistics in one member state
 - Risk of complete loss of trust
- Political demand for quality assurance
- 2005: European Statistics Code of Practice (rev. 2011)



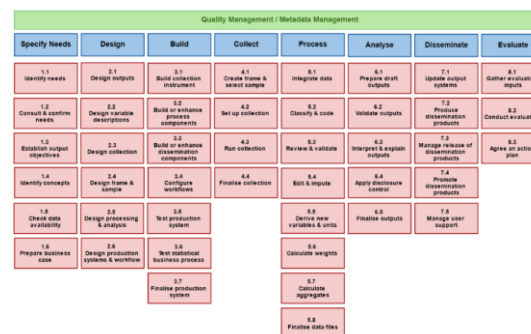
European Statistics Code of Practice

- 15 principles
- 82 indicators monitoring the European Statistical System (ESS)

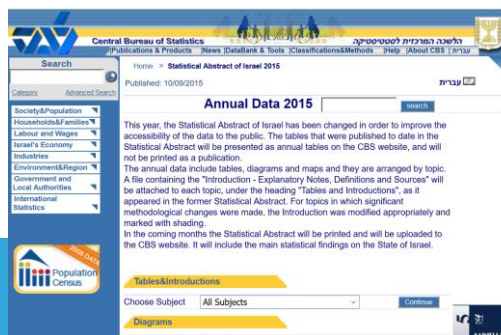
1. Institutional Environment



2. Statistical Processes



3. Statistical Outputs



Institutional Environment (33)

1. Professional independence (8)

of statistical authorities from other policy, regulatory or administrative departments as well from private sector operators

- Guaranteed by law
- The Head must have high standing
- Comment on misuse
- **Precondition for trust**

2. Mandate for Data Collection (3)

a clear mandate to collect information for statistical purposes

- Also admin data

3. Adequacy of Resources (4)

resources available to statistical authorities are sufficient to meet requirements

- Procedures to assess and justify

4. Commitment to quality (4)

systematically and regularly improve process and product quality

- Monitor, assess and report

5. Statistical Confidentiality (6)

guarantee of privacy for data protection

- Only used for statistics

6. Impartiality and Objectivity (8)

- scientific independence and objective, professional and transparent
- Sources & methods
- Releases preannounced
- Equal access for all

Statistical Processes (26)

7. Sound Methodology (7)

adequate tools, procedures and expertise

- international standards, guidelines, and good practices
- standard concepts, definitions and classifications
- Staff qualifications

8. Appropriate Statistical Procedures (9)

implemented from data collection to data validation, underpin quality statistics

- Admin data
- All processes GSBPM: Test instruments, sampling, etc

9. Non-excessive Burden on Respondents (6)

reporting burden is proportionate to the needs of the users and is not excessive for respondents

- Admin data when possible

10. Cost Effectiveness (4)

resources are used effectively

- Standardized solutions

Statistical Output (23): "Quality dimensions"

11. Relevance (3)

statistics meet the needs

- Consult users
- Monitor satisfaction

12. Accuracy and reliability (3)

statistics accurately and reliably portray reality

- Sampling errors and non-sampling errors are measured and documented
- Revisions analysed and documented

13. Timeliness and Punctuality (5)

statistics are released in a timely and punctual manner

14. Coherence and Comparability (5)

consistent over time and comparable between regions and countries; possible to combine and make joint use of related data from different sources

15. Accessibility and Clarity (7)

presented in a clear and understandable form, released in a suitable and convenient manner, available and accessible on an impartial basis with supporting metadata and guidance

The quality concept

Quality of processes:

Statistical concepts

Sources

Contact with respondents/data owners

Sampling

Measurement process

Data collection

Editing

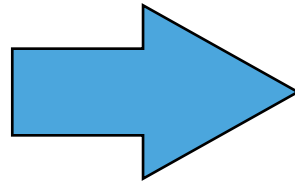
Estimation

Aggregation

Publishing and dissemination

Entering in StatBank

Documentation



Quality of contents:

Relevant

Accurate & reliable

Timely & punctual

Coherent & comparable

Accessible & clear

Transferable

Cost effective

Quality = Fitness for use

All processes must contribute to users' needs

General Environment: Political/legal context, Technology/standards



Ressources:
staff, IT-
systems etc.

Respondents/
registers etc.

Management processes

Specify Needs

Design

Build

Collect

Process

Analyse

Disseminate

Evaluate

Support processes: Quality, **metadata**, methods
& IT

Users

User needs /orders

How to enhance quality

- Talk to and listen to users!
- GSBPM with guidelines
 - Standards for processes
 - E.g. how do you find out what users need?
 - How do you go about seasonal adjustment?
 - Where do you produce which documentation?
 - **Easier to do it right the first time**
- Monitor quality indicators
 - A job for the Management
 - E.g. timeliness

How to enhance quality #2

- Encourage good behaviour when you see it
- Train staff in Code of Practice
 - Once you understand it, it's easy
 - When staff think about why they produce stats, it's more fun
 - Constant improvement
- Integrated metadata
- Establish a coherent NSS

Advantages and problems with quality

- The statistics remain relevant
 - The statistics service isn't hated and reduced
 - Satisfaction is in the smile of a user
 - Easier to do it right the first time
 - Avoid duplication of work
 - When staff think about why they produce stats, it's more fun
- It can be only words
 - It takes time and resources
 - Other tasks may suffer?
 - It reduces individual independence
 - It ruins the feeling of inventing the wheel
 - You may reveal your faults



The End