Workshop on the Implementation of a National Quality Assurance Framework for Official Statistics in countries of the Africa Region
Addis Ababa, Ethiopia, 6-9 December 2022

Session 4.3: Review of additional examples and practices

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Example 1:
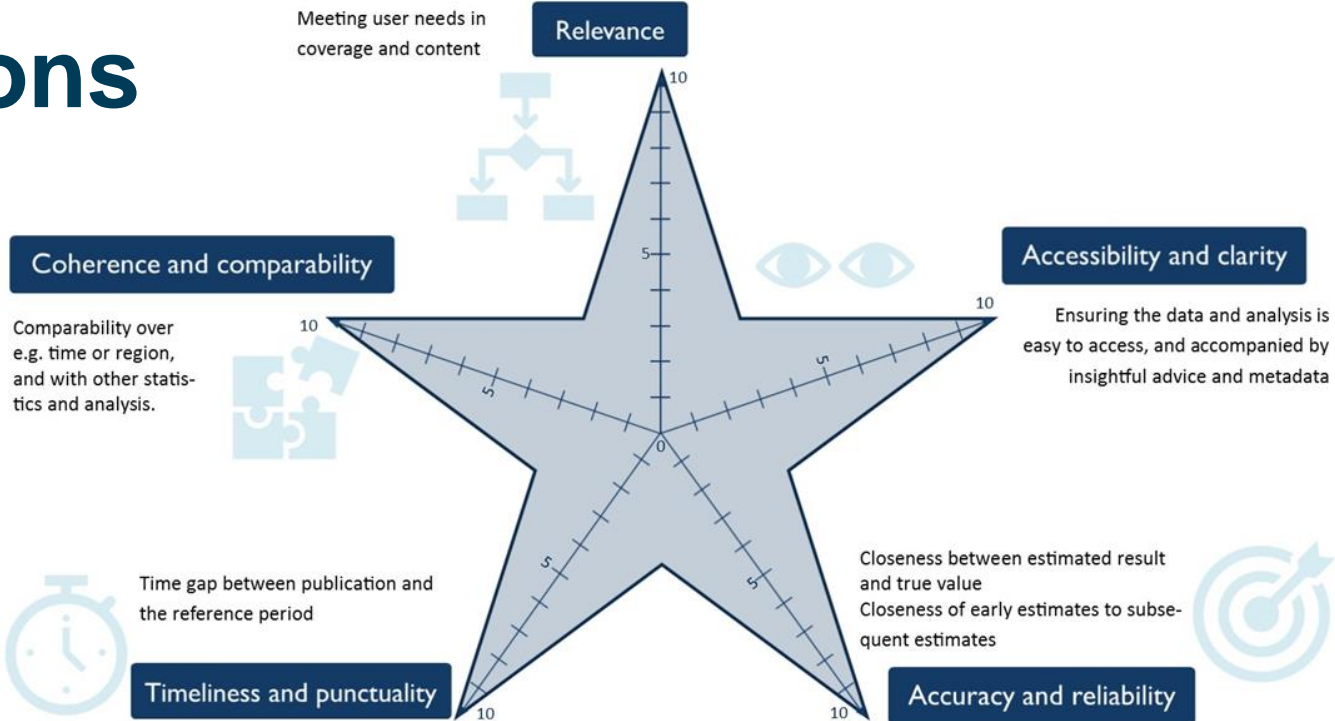# Use of novel data sources for consumer prices

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Quality assurance and new data sources, 9th Feb 2021

Quality dimensions

Meeting user needs in coverage and content

Relevance

Coherence and comparability

Comparability over e.g. time or region, and with other statistics and analysis.

Accessibility and clarity

Ensuring the data and analysis is easy to access, and accompanied by insightful advice and metadata

Time gap between publication and the reference period

Timeliness and punctuality

Closeness between estimated result and true value
Closeness of early estimates to subsequent estimates

Accuracy and reliability

What are alternative data sources?

- Scanner data

- Web scraped data

- Used in conjunction with data as currently collected

Why use alternative data sources?

- Improved coverage – for example regional

- High frequency of collection

- Reduced burden

- More granular information (eg expenditure)

Comparison of different data sources

Data dimension	Traditional	Scanner data	Web scraping
Data acquisition	Manual	Automated	Automated
Completeness/ scope	Sample items from sample of retailers	All transactions (census) from medium to large retailers	Bulk or sample from online retailers
Metadata	Item description + some attributes	Item description + (some) attributes Backseries may be available	Item description + attributes
Quantity data	None	Quantities sold	None
Timing	Single collection day	Daily	Daily/weekly

Ensuring quality of the data

- Initial data checks

- Standardising the data

- Monitoring the regular feeds

- Data sharing agreements

- Quality Assurance of Admin Data (QAAD)

Office for **National Statistics**

Ensuring quality of the outputs

- Robust statistical systems

- Research into new methods

- Impact analysis

- Incorporate QA into regular monthly production

- Advisory panels – stakeholder and technical

- International best practice

Example2:
Quality reports for registers and administrative data

4 MARCH 2020, NY

LASSE.SANDBERG@SSB.NO

See https://unstats.un.org/unsd/statcom/51st-session/side-events/20200304-2L-quality-assurance/

Statistisk sentralbyrå
Statistics Norway

Summary

- Starting around 2011/2012, Statistics Norway introduced a new approach to professionalise cooperation with data owners, which included MoUs and Quality reports. Experience with first register-based population and census showed need to correct data at the source.

- The statistics act gives Statistics Norway the right to **access** registers, but just as important, it also gives the right to **influence** registers. (standards, variable definitions, ..)

- "Agreements on cooperation" are supplemented by an **annual quality report for each register,** which included feedback on the micro-level for the first time.

Summary

- ESS Code of Practice was the underlying framework when developing the new system for quality reporting for registers.

- The indicators selected for the report can be grouped in the following five dimensions of quality: **Technical checks, Accuracy, Completeness, Integrability, and Time**.

Oman – E-Census

- Sources

Population
- Royal Oman Police
- Ministry of Education
- Ministry of Higher Education
- Ministry of Justice and Legal Affairs
- Ministry of Social Development
- Ministry of Health
- Public Authority for Manpower Register

Sources of Administrative Records Data in the Electronic Census 2020

Residences
- Ministry of housing
- Governorates affairs
- National Center for Statistics & Information
- Muscat Municipality
- Dhofar Municipality
- Sohar Municipality
- Namaa Holding Group

Interprises
- Ministry of Commerce, Industry & Investment Promotion.
- Governorates affairs
- Ministry of Labour
- Muscat Municipality
- Dhofar Municipality
- Sohar Municipality

Note: Reference provided as separate document

Oman – E-Census

In order for the administrative records to be used in the electronic census, it must pass through a large set of stages, which ensures accurate, comprehensive and timely data

- Refining and processing data that is missing some variables

- Linking and matching between variables by ID number

- Determining the time reference period

- Application of quality assurance standard

- Contacting record providers to ensure the accuracy of the data

- Knowing the reasons for non-responding

- Knowing the reasons for non-conformity

- Evaluate the quality of the variables

- Report inconsistencies in records

- Report missing metadata

- Update incoming records periodically

Oman – E-Census

Among the most important conditions that must be met to ensure data quality are the following:

• Available data must meet the needs of users.

• Ease of obtaining data in a timely manner.

• The data should be clear, high-accuracy and credible.

• The available data should enable international comparisons to be made.

• The possibility of the availability and use of metadata, with clarification of the used terms and definitions.

• Taking into account the provision of data at the lowest possible cost.

Other examples (random selection)

- Tools, metrics and quality reporting of administrative data sources (Poland) (Note: Reference provided as separate document)
  - Data profiling is the basic data quality check procedure.
  - Cohesion analysis of address data
  - The Variable Quality System (VQS) to monitor quality of source data - provides quality reports for all administrative data sources

- Quality assurance of administrative data (QAAD) report, e.g. for Value Added Tax turnover data
  (available at Quality assurance of administrative data (QAAD) report for Value Added Tax turnover data - Office for National Statistics (ons.gov.uk)

THANK YOU