



Eurostat – SDMX and Information Processing

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Bart De Norre, Eurostat

Efficiency in Energy Statistics

Quality of Energy Statistics

Quality:

- **role of Member States; role of Eurostat**
- **Several criteria (accuracy, relevance, coherence, cost-effectiveness, ...)**

Information processing:

- **Major success factor / critical factor**
- **Understand, share, model, re-use**
- **Difficult processes: validation – usage**
- **Who does what**
- **X international organisations – Y countries:
X*Y exchanges; X+Y systems**

SDMX

Common open standards for data and metadata

- **accepted worldwide for exchanging and sharing statistical information**
- **and as a general basis for statistical infrastructures.**
- Started in 2001 by seven international organisations (BIS, ECB, Eurostat, IMF, OECD, UN and World Bank)
- ISO standard (ISO 17369:2013)
- SDMX Roadmap 2020 (March 2016):
 - **Strengthening implementation of SDMX**
 - **Making data usage easier via SDMX**
 - **Using SDMX to modernise statistical processes**
 - **Better communication and capacity-building (including interaction with ESS Vision 2020 and UNECE modernisation of official statistics)**
- Promoted by the **European Statistical System Policy** and big enabler for the **ESS VISION 2020**

SDMX benefits

Enabler:

- reduce data errors
- improve timeliness
- improve accessibility
- improve interpretability
- improve coherence
- reduce the reporting burden
- reduce IT development and maintenance costs
(with open source approach, shared toolbox and improved interpretability).

For future IT development: standards independent of domain specific structures

"If each partner system were to use SDMX data structures and common IT building blocks, international information systems would be able to communicate 'machine-to-machine' as in industrial production processes."

SDMX Artefacts

- Standards on logical and technical level:
 - **"Content"**
 - **"Container"**
- Development of SDMX artefacts according SDMX guidelines and concepts
 - For example information model, content oriented guidelines, cross-domain concepts**
- Management by SDMX tools
- Exploiting/using by generic programs/services
- "Embed logic in data objects"

SDMX in Eurostat – ESS (European Statistical System)

- Statistical domains in SDMX
 - **38% of all datasets Eurostat receives via EDAMIS**
 - ESS: 26; further **increase**: 2016: +10; 2017: +4
 - GLOBAL: 5
 - https://webgate.ec.europa.eu/fpfis/mwikis/sdmx/index.php/SDMX_DSD_availability
 - For Energy Statistics:
 - **Supply-consumption chain => "semi-global" DSD development with IEA**
 - **Firstly Collection/validation/production process**
Afterwards dissemination
 - **Firstly DSD (data structure definition)**
Afterwards MSD (metadata structure definition)
 - **Still later: use of VTL (Validation and Transformation Language)**
- Note: Eurostat DSD on Prices**

SDMX in relation with ESS Validation

SDMX not to be perceived "stand alone" but in relation with ESS shared validation.

ESSC (ESS Committee) 18-19 May 2016: deployment actions!

Mandatory: agreement and documentation at Working Groups of validation rules and responsibilities

Optional: use of shareable and reusable ESS services to validate data

- Increase **effectiveness and efficiency** of collection and validation processes
- Increase the **quality** of European statistics

Implementation

- Gradual, all stakeholders
- Light – medium – full move to GLOBAL DSD (SDMX internationally agreed)
"The output of any of the three implementation packages should be SDMX-compliant files that can be used as an input for SDMX-compliant services available in different phases of the production process, like validation and importing data in production databases"
Possibly succeeding versions of DSD ("5-yearly")
- Internal "pivot" and related software / services in Eurostat IT statistical systems,
Generic IT systems and software used across many different domains
Validation tools (and logic) used by the Member States
- Increased automation in redesigned business processes (GSBPM)

Efficiency in Energy Statistics

Quality of Energy Statistics

**SDMX is a high priority
for Eurostat and the ESS**

**An important enabler in information
processing within Eurostat and the ESS**