SDMX as a standard for data sharing / standardization

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Overview

I. The Statistical Data and Metadata Exchange (SDMX) standard

II. SDMX, a key support for official statistics

III. Priorities looking forward
I. The SDMX standard - Introduction

- **Vision of SDMX**
  - A **broad** statistician / economist / IT perspective
  - Support **production/exchange** of statistics for public good
  - Useful perspective from **central banks** as data producers & users

- **Many achievements in the past 2 decades**
  - **ISO standard**, role of metadata, free / open-source tools
  - Increased number of Data Structure Definition (**DSDs**)?
  - **International** cooperation & data exchanges...
  - Governance & **trust** vs “fake news” / “alternative” sources

- **Still important challenges**
  - Complexity, costs, outreach...
  - Interaction IT – Statistics – Analysis – Policy-making...
I. The SDMX standard – the new 3.0 version

● **Large undertaking – up to almost half a million USD**
  - Strong international cooperation
  - Common financing by IOs' sponsors, plus internal resources
  - Target: second half of 2021

● **Many improvements**
  - Simplification
  - **Micro data**
  - **Multiple values** per attributes & bi-temporality (key for nationality-based statistics developed at the BIS)
  - **New data sources**
II. A key element supporting Official Statistics

- 2013 Fundamental Principles of Official Statistics

- Main considerations
  - Critical role of high-quality official statistics in analysis & policy decision-making
  - Essential public confidence in statistics
  - Need for effective fundamental values to govern statistical work

- 10 Principles
II. A key element supporting Official Statistics (cont’d)

- **1. SDMX helps to compile and make available statistics of practical utility**

- **2. SDMX an ISO standard** with strict professional considerations for the collection, processing, storage, presentation of statistics

- **3. SDMX standard for metadata:** present information on the sources, methods and procedures

- **4. SDMX to support the dissemination of reference information:** helps building trust & reduces misuse of statistics

- **5. SDMX to deal with all types of data from all sources** eg surveys, administrative records
II. A key element supporting Official Statistics (cont’d)

- **6. Address data sharing needs** while preserving individual data confidentiality & ensuring use for statistical purposes

- **7. SDMX.org** website and information on development (on [GitHub](https://github.com)) made public as required for statistical systems’ operations

- **8. Common statistical concepts and sharing supports coordination among statistical agencies**

- **9. Use of international concepts, global DSDs, registries, tools promote the consistency and efficiency of statistical systems**

- **10. SDMX shows & triggers international statistical cooperation**
III. Priorities looking forward (i) Micro data

- Several needs
  - Reconcile different types of data collections (eg supervisory data point model)
  - Micro-macro reconciliation (eg needs post-GFC, Covid-19)
  - Evidence-based policy needs access to granular information (eg distribution, inequalities)

- Expected benefits
  - Contained reporting burden despite more data needs
  - Enhanced statistical production chain as highlighted by Covid-19
  - Interoperability with other standards used for micro-data, such as XBRL eXtensible Business Reporting Language)
III. Priorities looking forward (ii) Big data

- **New information sources**
  - New formats eg geospatial
  - Micro data: «financial big data»

- **Backbone for developing Big Data platforms**
  - Key building block of ongoing projects in central banks, BIS
  - Facilitates the development of capabilities in advanced analytics
III. Priorities looking forward (iii) Data sharing

- **Data sharing**
  - Reduced reporting cost
  - From the “push” to the “pull” mode using web services

- **Not enough: dealing with confidential data**
  - Micro exchange
  - Make use of (newly developed) global identifiers
  - Confidentiality preservation tools
III. Priorities forward (iv) international statistical cooperation

- **SDMX already key in DGI work**
  - Rec 19 (International Data Cooperation and Communication)
  - Timely standardised **transmission** of data through agreed formats
  - **DSDs** established for several recommendations

- **Next framework for international cooperation in statistics**
  - Enhancing **existing core** official statistics information, especially as regards timeliness, frequency and international comparability
  - Addressing **emerging data needs** eg post Covid-19, climate

→ *Data sharing & SDMX can help on these 2 fronts*
III. Priorities (iv) international statistical cooperation (cont’d)

- **Revamped SDMX 3.0 will support:**
  - Collecting *more granular* information on financial markets
  - Better tapping into big, “alternative” data
  - Enhancing the *global statistical infrastructure* eg data-sharing, LEI
  - Better measuring non “traditional” statistical *new topics* underscored by Covid-19 (eg distribution issues, environment)
  - Towards timely, more “automatised” *production* of official statistics
Thank you!!

Selected references

- The Business Case for SDMX
- Progress Report of the SDMX sponsors on SDMX for the 52th session of the Statistical Commission, UN Economic and Social Council, December 2020
- Central banks’ use of the SDMX standard, IFC Report, no 4
- Fundamental Principles of Official Statistics 2013/21

Questions?

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