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Progress Report on SDMX

Prepared by the World Bank

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PROGRESS REPORT ON SDMX

1. Introduction

1.1 In 2001, the Bank for International Settlements, the European Central Bank, Eurostat, the International Monetary Fund (IMF), the Organisation for Economic Cooperation and Development (OECD) and the United Nations joined together to develop more efficient processes and standards for exchanging and sharing data and metadata within the scope of their collective activities. The World Bank joined the initial group of sponsor organisations in 2003.

1.2 The aim of the Statistical Data and Metadata Exchange (SDMX) initiative is to create and maintain technical and statistical standards and guidelines to be used and implemented by the sponsoring or other organisations dealing with statistical data and metadata. Together with the use of modern IT technologies, these SDMX standards and guidelines should improve efficiency by preventing duplication of effort. The SDMX standards and guidelines build on existing technical and statistical standards. With the releases in 2009, these standards and guidelines reached a high level of maturity and are ready for broad implementation.

1.3 The Statistical Commission has received progress reports on the SDMX initiative since 2002. The Commission has recognised and supported the SDMX standards and guidelines as "the preferred standard for the exchange and sharing of data and metadata", requesting the sponsors to continue their work and encouraging the national and international statistical organisations to further use and implement SDMX.

2. Recent developments

2.1 SDMX Global Conference 2009

The major SDMX event in 2009 was the **Global SDMX Conference** in January 2009 in Paris, hosted by the OECD. The conference dealt with the following issues: the SDMX standards and guidelines, the SDMX implementation projects and an outlook on further plans. Separate sessions on hands-on capacity building (training) were also organised.

A summary report on this SDMX Global Conference is attached in Annex 1. The key message coming out of this conference was: the SDMX technical and statistical standards and guidelines have reached a level of maturity now that is good enough for statistical organisations to use and implement them.

2.2 Implementation of SDMX amongst statistical organisations

The following findings of a survey amongst statistical organisations organised by the SDMX sponsors in 2009 underline the intention of many statistical organisations around the world to embark on SDMX soon:

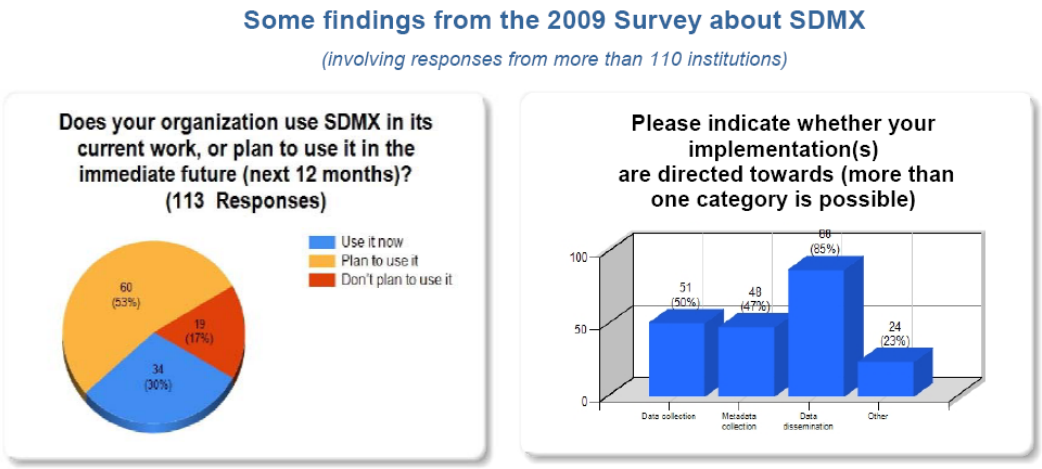

Figure 1: Some findings from the 2009 Survey about SDMX

These results underline that many statistical organisations around the world are already dealing with the use and implementation of SDMX in statistical domains or will deal with it in the near future.

2.3 SDMX website and user forum

Major improvements to the SDMX website are under way, aimed at better presentation and accessibility of SDMX implementation actions in statistical domains and statistical organisations, better presentation and accessibility of the SDMX IT tools, and better recording and presentation of SDMX workshops, seminars and other important events.

In November 2009, the SDMX user forum has been put in place to stimulate the creation of an SDMX user community; the user forum is moderated by colleagues from the sponsoring organisations or other statistical organisations. This user forum will interact with statistical organisations implementing the SDMX technical and statistical standards and guidelines or dealing with SDMX otherwise. The user forum can be accessed through the SDMX website (www.sdmx.org).

2.4 SDMX and ISO

Following authorisation by the International Standards Organization (ISO), a new work item focusing on upgrading ISO Technical Specification 17369 (SDMX) was started. The upgrade will be based on several years of analyses associated with actual and envisaged implementations using SDMX Technical Standards, the latest of which (Version 2) was approved by the SDMX Sponsors Committee in November 2005. The wide range of comments provided to the SDMX Secretariat, covering a range of ways to use SDMX in institutional settings and with different subject-matter domains, confirm the significance of an upgrade and the need for

strengthened features associated with content-oriented information and web architecture.

2.5 Collaboration within the respective constituencies and capacity building

More and more SDMX-based data structure definitions and metadata structure definitions are being drawn up and used in statistical domains. These need to be agreed between international organisations (as far as common data and metadata sets are concerned) and with the respective Member States ultimately producing and exchanging the SDMX data and metadata messages. This work closely involves national statistical organisations.

SDMX knowledge is further built up at international and national level within each of the sponsor organisations and their respective constituencies. Seminars and workshops are being held all over the world to discuss how to implement SDMX at various levels. Structures for a standard SDMX workshop and SDMX self-learning packages will be successively made available on the SDMX website.

2.6 Organisational issues

On 1 January 2010, the SDMX chair passed from Eurostat to the World Bank (Ms Shaida BADIEE). The SDMX Secretariat (in which all sponsoring organisations are represented) is continuing to carry the work forward.

3. Conclusions and the way forward

The SDMX technical and statistical standards and guidelines, together with an IT architecture and IT tools, facilitate the efficient exchange and sharing of statistical data and metadata. SDMX is one of the main enabler supporting the rationalisation of statistical business processes under way in many statistical organisations.

Based on more and more sophisticated SDMX standards and guidelines, SDMX is more and more used and implemented in many statistical organisations. National and international organisations are involved at various levels in maintaining the SDMX standards and guidelines and implementing them in statistical domains.

Capacity- and knowledge-building on SDMX also progresses at various levels with many events held or other knowledge-building facilities provided.

Statistical Data and Metadata eXchange

SDMX GLOBAL CONFERENCE 2009

SUMMARY REPORT

19-21 January 2009, hosted by the OECD in Paris

Towards building an SDMX community

More than 240 experts from 65 countries and nearly 20 international organisations joined together to launch 2009 with a highly successful conference on ways to use SDMX standards and guidelines with mainstream technology to support statistical processes.

Participants expressed a common theme: now is the time to advance efforts to create a global SDMX community - especially via the web - to foster broader collaboration in an ever-widening range of institutional implementations and subject-matter domains.

All presentations and a list of participants are available via the SDMX website or directly from the special conference website (*www.oecd.org/std/sdmxconference2009*).

Bird's eye view of the Conference plenary and capacity-building sessions

Conference topics focused attention on practical experiences, tools and further opportunities for exchanging data and metadata (i.e., details about data).

Through more than 40 presentations over three days, participants communicated and demonstrated how SDMX standards and guidelines support more effective statistical processes within and between institutions as well as for users of statistics. Important contributions particularly touched on use of SDMX for web dissemination and for internal production systems. Significant SDMX developments around the world included national and international organisations, e.g. in Brazil, in Mexico, in the Philippines, in the United States, in Italy, in Portugal, in UN Millennium Goal Indicators.

Implementation of SDMX was not seen as necessarily an additional cost, particularly when systems are scheduled to be upgraded or re-designed and make use of available technology platforms which support SDMX standards.

Support for decision-makers for the use of SDMX would benefit from the provision of additional non-technical materials for senior managers at statistical institutions and from further capacity-building around the world.

Nearly 200 participants attended the special third day of the conference that had been arranged for capacity-building, with two-thirds at the technical standards track and one-third at the content-oriented guidelines track.

Some key points of the Conference plenary and capacity-building sessions are noted below:

Conference Plenary

- ***Experiences and lessons learned***
  Significant progress is being made through implementations in a number of subject-matter domains. Developments involving SDMX are multi-disciplinary and require teamwork across a variety of skills (e.g. statistical, technical and managerial). The contribution of those with statistical knowledge is central to making the most out of the use of the SDMX framework of standards and guidelines.
- ***Statistical processes and SDMX***
  Examination of an "end-to-end" approach to using SDMX shows potential for significantly enhancing SDMX's contribution to greater efficiency in internal statistical processes and dissemination. Possible fine-tuning or new requirements for SDMX Technical Standards may be emerging based on experiences with recent implementations.
- ***Perspectives on metadata***
  Metadata registries are being implemented and have further potential; metadata management for census data exchange and dissemination shows promise.
- ***SDMX Survey and Panel***
  Results of a questionnaire answered by more than 100 institutions shows 85 percent of respondents use or plan (within the coming year) to use SDMX standards and guidelines. All institutions considered SDMX would be useful for their organisations, with close to 70 per cent indicating it as very or extremely useful.

  The Panel discussion brought together perspectives from sponsoring institutions, countries and vendors. It appears that investment in SDMX by vendors is likely to increase as institutions more widely use SDMX standards and guidelines around the world. Creating an active SDMX community, including a user forum or help desk and additional user-friendly training materials, was seen as critical in the months ahead. Members of the Panel also saw benefits from clarifying SDMX conformance principles, particularly for tools developments and for potential sharing of application (open source) code. Steady growth of implementations is expected to benefit from ensuring that annexes based on SDMX standards and guidelines accompany the release of newly upgraded or revised statistical methodologies, in particular, providing detailed information about SDMX-conformant data and metadata structure definitions.

Capacity-Building

- ***SDMX Overview Session - Plenary Session***
  The key message is that SDMX is not essentially about technology. The business case is built on greater efficiency through the use of metadata. The recent long-awaited release of the SDMX Content-Oriented Guidelines (2009) strengthens the SDMX framework provided by SDMX Technical Standards (Version 2). A new User Guide is now available on the SDMX website.
- ***SDMX Technical Standards - Separate Track***
  Development of web-oriented implementations, particularly involving visualisation techniques, are supported by a growing number of tools relying on the SDMX framework.
- ***SDMX Content-Oriented Guidelines - Separate Track***
  The SDMX Content-Oriented Guidelines (2009) and domain activities are advancing. Experts are keen to be made aware of, and contribute to, continuing developments.

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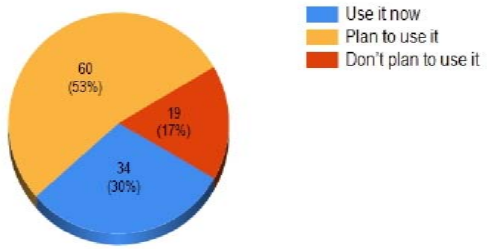
Statistical Data and Metadata eXchange

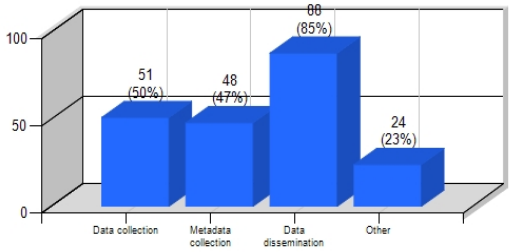
Some findings from the 2009 Survey about SDMX

(involving responses from more than 110 institutions)

Does your organization use SDMX in its current work, or plan to use it in the immediate future (next 12 months)? (113 Responses)



Please indicate whether your implementation(s) are directed towards (more than one category is possible)



Participation at SDMX Global Conference 2009

Algeria	*Congo*	*India*	*Mali*	*Poland*	*Tajikistan*
Argentina	*Croatia*	*Indonesia*	*Malta*	*Portugal*	*Tanzania*
Australia	*Czech Republic*	*Ireland*	*Mexico*	*Romania*	*Togo*
Austria	*Denmark*	*Israel*	*Mongolia*	*Russian Federation*	*Thailand*
Belgium	*Estonia*	*Italy*	*Nepal*	*Saudi Arabia*	*Tunisia*
Bosnia and Herzegovina	*Finland*	*Japan*	*Netherlands*	*Singapore*	*Turkey*
Brazil	*France*	*Jordan*	*Niger*	*Slovak Republic*	*United Kingdom*
Bulgaria	*Germany*	*Latvia*	*Norway*	*Slovenia*	*United States*
Cambodia	*Greece*	*Lithuania*	*Oman*	*Spain*	*Vietnam*
Canada	*Haiti*	*Luxembourg*	*Papua New Guinea*	*Sweden*	*Yemen*
People's Republic of China	*Hungary*	*Madagascar*	*Philippines*	*Switzerland*	

SDMX Sponsoring Organisations

Bank for International Settlements (BIS)
European Central Bank (ECB)
European Commission (Eurostat)
International Monetary Fund (IMF)
Organisation for Economic Cooperation (OECD)
United Nations (UN)
World Bank (WB)

United Nations Organisations

United Nations Statistics Division (UNSD)
United Nations Economic Commission for Europe (UNECE)
United Nations AIDS (UNAIDS)
United Nations Children's Fund (UNICEF)
United Nations Conference on Trade and Development (UNCTAD)
United Nations Educational, Scientific and Cultural Organization (UNESCO)
United Nations Food and Agricultural Organisation (FAO)
United Nations Industrial Development Organisation (UNIDO)
United Nations Environment Programme (UNEP)
World Health Organisation (WHO)

Other International Organisations

African Development Bank (ADB)

ABOUT SDMX

The Statistical Data and Metadata Exchange (SDMX) initiative fosters the development and use of technical standards and content-oriented guidelines for greater efficiency in the exchange, sharing and dissemination of data and metadata using mainstream technology as well as in production processes involving internal statistical systems.

Sponsoring organisations are: BIS, ECB, Eurostat, IMF, OECD, UN, World Bank. More information can be found at www.sdmx.org.

The International Organization for Standardization (ISO) has approved SDMX Technical Standards as Technical Specification 17369.

SDMX regularly reports on its activities to the Committee for the Coordination of Statistical Activities (about 25 international organisations), which has adopted SDMX for data exchange and sharing, and the UN Statistical Commission, which last year recognised SDMX as the preferred standard for the exchange and sharing of data and metadata and encouraged further implementations by national and international statistical organisations.