

B. Presentation and dissemination of metadata

25.7. *Layered presentation of metadata.* Compilers of international merchandise trade statistics must make sufficient metadata available to enable both the least and the most sophisticated users to readily assess data and their quality (see IMTS 2010, para. 9.22). It is good practice to structure metadata in layers of incremental detail while providing clear links between high-level and specific metadata concepts. Such a layered presentation allows the needs of diverse groups of users, who may have different levels of statistical expertise, to be met.^[4]

25.8. *Presentation of structural and reference metadata.* IMTS 2010 (para. 9.22 (b)) recommends that structural metadata be presented as an integral part of the international merchandise trade statistics database in such a way as to be extractable together with any data item and published as part of statistical tables. On the other hand, reference metadata could be presented in the form of a detailed explanatory note describing the scope, coverage, and quality of a data set and be made available electronically alongside the database or in special publications (para.9.22 (a)).

25.9. *Use of standardized metadata concepts.* It is recommended that the dissemination of metadata related to international merchandise trade statistics be carried out in compliance with the approach adopted by a given country to metadata across all areas of economic statistics (IMTS 2010, para. 9.25). Whenever feasible, therefore, it is good practice for compilers of international merchandise trade statistics structure to present their metadata using standardized concepts that are relevant across statistical domains (e.g., by adopting cross-domain concepts derived from the SDMX framework or the OECD Glossary of Statistical Terms). The aim should be to promote harmonization of statistical information and its related high-level metadata across various institutions and statistical domains, even if some specific metadata concepts are not applicable or are organized differently in different domains or institutions.

25.10. *Linking data and metadata.* As metadata are generated and processed during every step of the compilation process, there is a strong need for a metadata management system to ensure that the appropriate metadata retain their links with data. IMTS 2010 recommends that metadata dissemination be an integral part of the dissemination of international merchandise trade statistics (IMTS 2010, para. 9.25). A good practice in this regard is to actively link metadata to the statistical data they describe, and vice versa,^[5] by implementing metadata-driven systems and management systems for metadata throughout the various stages of the statistical production process. There are several information model specifications that can contribute to achieving this goal (most notably SDMX and DDI^[6]). While such specifications are designed to enable performance of different functions, they can be used together in the same system, or complement each other, in the compilation and exchange of data and metadata.^[7]

25.11. *Metadata registries.* A metadata registry is a central repository (usually a database itself) with information that allows linking the detailed definitions (semantics) and the codes (representations) of the metadata items used to describe a particular statistical data set. The Euro-SDMX registry is an example of a metadata registry (which implements the SDMX registry specifications)^[8]. It is good practice for compilers of international merchandise trade statistics to put special emphasis on the development, maintenance and dissemination of metadata registries at the national and international levels in order to improve the harmonization, standardization, use, reuse and interchange of their metadata.^[9]

25.12. *Access to metadata.* Compilers of international merchandise trade statistics should make every effort to ensure that users have ready access to metadata through multiple dissemination channels, both in printed and in electronic format (whereby Internet dissemination plays a key role). As a general rule, as metadata is considered as having a high public good component, their on-line dissemination should be free of charge, regardless of whether the international merchandise trade statistics they describe are disseminated for a fee according to the compiling organization's policies.^[10]

[4] See OECD, Data and Metadata Reporting and Presentation Handbook (Paris, 2007), p. 22, para. 6.3.2.

[5] Ibid.

[6] The Data Documentation Initiative (DDI) is an effort to create an international standard for describing data from the social, behavioural, and economic sciences.

[7] See, e.g., A. Gregory, P. Heus and J. Ryssevik, "Metadata", Working Paper No. 57 (German Council for Social and Economic Data (RatSWD), March 2009).

[8] See par. 9.32 on the Euro-SDMX Metadata Structure (ESMs). Eurostat's Metadata Server (RAMON) is available at http://ec.europa.eu/eurostat/ramon/index.cfm?TargetUrl=DSP_PUB_WELC.

[9] The International Organization for Standardization / International Electrotechnical (ISO/IEC) International Standard 11179-1 provides a more general discussion of metadata registries.

[10] See OECD, Data and Metadata Reporting and Presentation Handbook, p. 22.