

IPS Paper

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Results achieved, difficulties encountered and challenges still to be faced in implementing Istat quality strategy

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Brief Description

National Statistical Institutes are increasingly involved in producing official statistics from non traditional sources. Exploiting Big data, trusted smart statistics, non probabilistic samples and administrative data is a wonderful occasion for providing timely data with a very high level of detail, giving satisfaction to a wider audience.

Often, such sources are used jointly, also with traditional surveys, so that the resulting statistics are multisource.

These new input features gave also rise to a renewal of the methodologic machinery used in NSIs and a revision of the statistical processes. New approaches are needed to evaluate quality of results and to ensure that they are based on sound methods and worth to be included among official statistics.

This session has the objective to gather different experiences and compare possibly different approaches.

Abstract

In September 2020, once the modernization process started in 2016 reached a good level of maturity, Istat renovated its commitment to quality by re-constituting a Quality Committee, that had been already working from 2010 to 2016, and formalising the role of Quality Manager. In 2021 a new quality strategy, developed by the Quality manager with the Quality committee support, was approved by the Istat top management. It includes a set of actions to be conducted in the following 3 years with the aim:

- i) to renovate or improve existing quality tools like metadata systems;
- ii) to develop and implement a new procedure for the quality assessment of Istat statistical processes;
- iii) to improve the quality of statistics produced by the National Statistical System.

Concerning metadata systems, Istat is currently equipped with two separate metadata systems, SIDI-SIQual for reference metadata, process and quality documentation, and SUM for structural metadata. Both the systems need to be renovated and we are currently designing a new unique metadata system called METAstat. It will be integrated with the several Istat Systems to facilitate e.g.: metadata harmonisation and their reuse in statistical production, statistical process documentation and quality report production according to international standards like GSBPM and SIMS, quality indicators collection and analysis on statistical processes and products.

With regard to quality assessment of statistical processes, the evaluation methods defined in the quality strategy are differentiated by statistical process types, depending on their levels of maturity, methodological soundness and standardisation levels:

- For traditional processes (e.g. surveys) a checklist was developed to verify the compliance of these processes to sound methodologies and good practices. The "compliant" processes obtain an internal label of conformity. Improvement actions are identified for the non-compliant and audits are going to be applied to a small subset of them.
- For complex multisource statistical processes that are at the basis of our Integrated System of Statistical Registers, a metadata model and a system of quality indicators to monitor and evaluate the different steps of such processes has been defined and tested. It is now starting to be implemented in some pilot registers. Such metadata and quality indicators will be managed in the METAstat system.
- Concerning big data and Trusted Smart Statistics it is planned to establish an ad-hoc quality framework. A review of the proposal made in international projects has been made and it will be the basis for developing the Istat proposal.

As for the National statistical system, different actions were planned for Bodies of the system that produce European Statistics (called Other National Authorities – ONAs) and the others. Specifically, for the ONAs several audits were carried out, while for not-ONAs, a guide for the implementation of the recently approved Italian Code for the quality of official statistics is being finalised.

The paper will describe the main actions implemented and results achieved, with particular reference to the METAstat system and to the checklist for traditional surveys assessment.