**Innovation and modernisation in the revision of the European statistics Code of Practice**

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**Abstract**

*The external world is rapidly changing, producing dramatic shifts, both in the statistical process and the production model as well as in its output. The producers of official statistics face new challenges.*

*The growing availability of data discloses new opportunities, in particular about the use of administrative archives, the adoption of increasingly accessible unstructured sources and integration of data from multiple data sources. But at the same time it becomes crucial for the NSIs to have access to administrative data and to rethink and to extent the role of sampling surveys in a different data environment. The coordination role of the NSIs represents a strategic key aspect in a modernization process which is advancing in the ESS as a whole, as well as the cooperation within the European and National statistical system and beyond finding new ways of working together in order to fulfil both European and national statistical needs. New data sources, as big data, require that we rethink our traditional statistical tools, review our IT architectural infrastructure, update our quality commitment looking at innovation, and enhance research and partnership among other NSIs and other producers. The ESS has long-term service capability to adapt fast enough to keep up with changes in the environment, but if National Statistical Institutes want to produce trustworthy data from new data sources, they must introduce concepts and tools for quality evaluation specifically devoted to a multisource environment. The European Code of practice has been revised including key aspects mirroring this new challenge The implementation of the Code with a new round of peer review would be a chance for the ESS to make evidence of innovation, good practices and partnership .*

**Keywords:** European code of practice, European statistics, modernisation, coordination

**1. The changing world and the ESS key role**

The evolution of the context in which the Statistical Institutes are operating has brought out the need for a continuous adaptation of the information produced to the needs of society and a new strategy for producing official statistics. The increasing complexity of modern societies and the multidimensional nature of the phenomena (think of globalization, wellbeing, the environment and competitiveness) require a continuous expansion of statistical information to meet new and more specific needs, of territorial detail (from global phenomena to micro-territorial tendencies) and type of information produced (micro-data, macro-data or micro-economic studies, etc.). In a rapidly evolving scenario, the timeliness of information is becoming an increasingly important requirement for the analysis of all socio-economic phenomena.  
On the other hand, the development and diffusion of new digital technologies have brought down many obstacles, first of all, cost for the production, storage and analysis of information; this in itself makes possible that other subjects, public and private, are now able to collect, process and communicate statistical data as never before. The human resources for the development, production, dissemination and communication of statistics use more agile competencies and skills.

The Statistical Institutes therefore find themselves competing with other producers, who supply often more timely data but respecting less stringent quality constraints. Research contributes to improving statistical information, to experimenting and developing new techniques and methodologies, to implementing thematic analyses, and to promoting initiatives aimed at integrating new sources, big data and open data in the production and dissemination of official statistics.

The production model that enhances the numerous information provided by natural and legal persons in various capacities to the public administration is a central aspect which drives to the importance of reinforce the access to administrative data and to increase the use of statistical registers coming from the integration of survey data, administrative data as well as data coming from new data sources.

The effort on access information from multiple data sources and integration of data from multiple sources needs a clear mandate by institutional framework, and also physical security of ad hoc integrated data measures to preserve personal and sensitive data as well as to ensure authorized access. The quality assurance has to lead to ensuring that data are produced according to standardized and reproducible processes. To this effect data and metadata sharing is essential combined with a change of view overcoming the approach of "locked” data towards “open data”. The capacity to "navigate" the pool of integrated data is a fundamental advancement, compared to the traditional outputs of official statistics.

The ESS commitment to quality and the revised European statistics Code of practice with its implementation represent a systematic attention and effort on quality, which is one of the biggest comparative advantages in relation to other statistics providers.

In that respect it was and it is important to keep the attention on possible innovation and relevant aspect of the modernization of European statistics. That has been taken into account in the revision of the European Statistics Code of Practice.

2. **A systematic focus on commitment on quality**

The adoption of the European Statistics Code of Practice by the European Statistical System (ESS) in May 2005 and its revisions in September 2011 and in November 2017 mark an important step to promote the common values within the ESS and to enhance trust and confidence in European statistics. The last revision demonstrates that the Code as a soft law can be a dynamic tool responding to the changes in the institutional framework, the statistical process and statistical products. It is a good opportunity for the ESS to reinforce progressive behaviours and other factors for modernizing the statistical production and to enhance efforts to make also national statistical systems more efficient. The Code of Practice has been established to provide a common standard tool aiming at ensuring public trust in European statistics and how European statistics are to be developed, produced and disseminated in conformity with the statistical principles clearly described into the European Statistical Law. In the Regulation (EC) no 223/2009 of the European parliament and of the Council and its revision there is a the specific article (Article 11) on the European Statistics Code of Practice which attest the value of the code but at the same time the awareness of having a dynamic tool that have to take into account also the challenges. This is the reason why the Code of Practice shall be reviewed and updated as necessary by the ESS Committee and amendments shall be published by the Commission. The work undertaken by the High Level Group on Quality established in 2016 by the ESSC is a further action which proofs that in the ESS we have made efforts with respect to quality and commitment to follow the European Statistics Code of Practice and the standards required not only for developing, producing and disseminating European statistics but also for discussing and then including new aspects as coordination and cooperation, innovation and new challenges concerning access information from multiple data sources and integration of sources, use of big data and open data.

In a modernization process which is advancing in the ESS as a whole, the coordination role of the NSIs represents a strategic key aspect, as well as the cooperation within the European and National statistical system and beyond finding new ways of working together in order to fulfil both European and national statistical needs. The new principle on Coordination and cooperation introduced in the revision of the Code represents an important step to raise accountability of NSIs and Eurostat within the National Statistical System and within the ESS as a whole. The coordination role it is strategic also taking into account the challenges for measuring progress towards 2030 sustainable development goals and the role assigned by the Cape Town Global Action Plan to the NSIs and the NSS.

The coordination is part of the institutional environment and represents a horizontal element which contribute to achieve the compliance with many specific aspects of the Code covering the institutional environment, the statistical production processes and the output of statistics.

The coordination role performed by NSIs at the national level and by Eurostat at the community level implies “internal coordination” by NSIs within the National Statistical System and by Eurostat within the Commission. The coordination role also implies a degree of cooperation (‘external coordination’) among all the actors in the ESS. It is the opportunity to enhance partnership on the basis of which we are able to join the efforts for common interested topics, to improve the possibility of sharing experience to build up joint projects and share generic tools and, at last, to look for outputs to be re-used within ESS or in our National Statistical System.

Coordination is not a “one-way-street” and requires the commitment of both the co-ordinator and the co-ordinated agency. Behind the coordination there is partnership and mutual trust between the partners. The coordinating body should ensure that it engages fully with those being coordinated, to explain likely future changes, to provide them with standard tools to be followed as well as guidelines and to remark benefits and possible common positions. But it means also cooperation on what is needed to strengthen the statistical capacity of the system providing guidance, training, and specific technical support to the ONAs.

We need to consider not only the NSIs but also the other players who play an important role and for which adherence to the code should represent an opportunity but also a responsibility from which not only its own national statistical system but the European statistical system itself derive benefits. In fact, Statistical authorities comprising the European Union Statistical Authority (Eurostat), the National Statistical Institutes and other national authorities (ONAs) responsible for the development, production and dissemination of European Statistics, commit themselves to adhere to the Code of Practice.

At this point it is important to clearly define the role of ONAs, their responsibility of becoming an ONA- and a distinction between producers and providers within National Statistical System as well as in the ESS. It is time for the ONAs to have a clear role identifying not only who they are but also what they produce and how they produce. This process foster their recognition not only within the National Statistical System but also in the National Statistical Program and among users and it is useful to promote their strengthening in statistical capacity and the development of skills and stronger competences.

Following the results of the peer review 2013-2015 in Italy, the implementation of the improvement actions and according to the European statistical Law provisions, Istat has carried out an in depth analysis on the current and potential ONAs. The analysis was made using an assessment questionnaire to evaluate who produce what concerning European statistics, in compliance with which European legislation and who transmit to whom data. This assessment allows also to distinguish between producers and providers to re-profiling ONAs, thus reducing the number of them and at the same time vitalizing concrete actions to better coordinate statistical activities of ONAs having a sight to the providers, too.

**3. The value of the Code and its implementation**

The revision of the European Code of Practice opens the door to further reflection on its implementation and the assessment of the adherence to the code by the partners in the ESS. The HLG on Quality has recently focused its activities to explore the future of the assessment of the implementation of the code towards a new round of peer reviews.

The audit-like approach applied in the round of peer reviews 2013-2015 was a value in Istat and in the National Statistical System fostering a culture of self-assessment. The evidence-based approach is an important means to discover potential weakness, good practices and innovative tools and a catalyst for positive change. The impact of the exercise is not only on the NSIs but also on the National Statistical System (NSS) as a whole. The structure and functioning of the NSS is essential to better understand the governance and the dynamics that exist in a more or less complex system. In this respect, the involvement of the ONAs is essential even if the level of compliance to the Code can vary a lot. The peer review has helped to raise awareness on commitment on quality. It was also a valuable opportunity to share the relevance of the outcome as a value for the credibility of official statistics and the importance to adhere to the principle of the Code of Practice, which, together with the general quality management principles, represents a common quality framework in the European Statistical System and another way to express the coordination role. The involvement of ONAs in the next exercise should be an opportunity to assess the adherence to the Code not only by “virtuous” ONAs but also by the “less advanced” and “more difficult” authorities to coordinate. The opportunity of the self-assessment and audit-like approach could be seen by them as a great occasion also for the ONAs to show good practices, points of strengths and not merely as a burden.

Taking into account the main new aspects included into the revised code and the profound change of the production processes, the ESS has an incredible opportunity to assess the different dimension parts of the new challenges.

The Peer Review was a very positive experience with a valuable impact in all the phases of the process: preparation/organization of the Peer Review and assessment/implementation of the Improvement actions.

The audit-like approach forced NSIs and ONAs to provide evidence on statistical activities.

The most difficult aspect of the Peer Review was the definition of the improvement actions following the recommendation given by peer reviewers. Making available to the public the list of improvement actions means making visible inside and outside the National Statistical System the NSIs commitment of moving forward as another proof of accountability of the NSIs. The monitoring of the implementation of the improvement actions was a great opportunity to follow, to push sometimes, and to deviate the focus on concrete activities in the Institute from a strategic perspective. We consider profitably to make use of this experience for the next Peer Review to enhance the value of good practices which can be re-usable within the ESS, and can increase our partnership among NSIs and Eurostat. Furthermore the process should provide the opportunity to bring evidence of specific, measurable, attainable, relevant and time-bound improvement actions also by ONAs.

The new aspects included in the revised European Code (e.g. coordination and cooperation, access information from multiple data sources, integration of sources, new data sources including big data, open data) needs to be assessed in the next round of peer reviews. The ESS has the occasion to direct the new exercise on the new challenges identifying innovative practices for learning from each other.

A standard tool as the Self Assessment Questionnaire (SAQ) should be redefined taking into account the experience made in the previous round and, in particular, it should have a focus for the NSIs on the new aspects, while for the ONAs on all principles due to a different level of advancement.

The Peer Review should apply on all principles for the ONAs. ONAs should be aware that being ONAs implies rights but also a strong commitment on quality principles and on strategic aspects provided by the European Statistical Law (like access to administrative sources, coordination role, etc) on one hand and a strong commitment to adhere to the Code, on the other. The NSIs has a strategic role in coordinating the other national authorities which has to be accompanied by enhancing dialogue with the ONAs and supporting them to better follow the adherence to the Code providing technical assistance if needed on specific aspects of the development and production of European statistics and specific training according to capacity needs. Thus promote also the positive approach for better coordinating statistical activities and reporting, monitoring, and data transmission in compliance with sectorial European legislation.

**4. Conclusion**

The experience of peer reviews has highlighted the opportunity to prepare the exercise in advance using an interdisciplinary approach, team work and identifying synergies among several activities. The output of this work becomes a benefit showing the importance of leaving proof of our work to be used by all colleagues. This approach can be followed even after the peer review and should be used to come to a consolidated set of documentation.

The whole process of implementation of the European Code is meant to open the door to the outside world and in this respect “communication” (internal and external) is an important dimension in which we have to invest for the new round. In a communication strategy, as strategy of the ESS on better communication on European Statistics, the efforts we had made and we are making on the adherence to the principles of the Code should be visible not only through reports but it should also reach a public as wide as possible to enhance the value of official statistics.

The visibility of the NSIs in the National Statistical System and in the ESS as a whole and towards the other stakeholders, as well as at the political level and civil society can benefit from the process itself.

We have the chance to make evidence of innovation, good practices, partnership and investment on modernizing the official statistics in a data revolution, to promote the value of official statistics and our commitment on quality.

We must move forward on the path of modernization and show the innovations we are capable of doing well pulling in the implementation of the principles of the code also the ONAs more than in the past peer reviews. But, in order to do this, it is also essential strengthening our capacity of coordination providing guidelines, a technical support and adequate training at national level to the ONAs, and fostering the collaboration with each other and with the different actors of the statistical system at national and European level .

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