

## **Romanian official statistical approach and practices to quality assurance framework**

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- ***European context***

In the context of changes in the European Statistical System (ESS), to build confidence in European statistics, upholding the fundamental principles of statistics, the new law of European statistics has emerged as a necessity imposed by the review of the functioning of the ESS and the development of more flexible methods of production and dissemination of the European statistics, the setting up of clearer priorities for reducing the response burden.

Review of the European statistics law was also a necessity arising from fundamental principles, to guarantee independence, impartiality and elaboration of European statistics with high quality. European Statistics Code of Practice is another approach that led to the revision of European statistics law to align it to the Code's principles of independence, integrity and responsibility of national authorities and of a Community.

To meet these new requirements emerged on the European level, for a better integration of the Romanian official statistics within the European Statistical System and answer the requirements imposed by the principles of the Code of Practice, the Romanian official statistics have developed and implemented since 2009 a new statistical law.

It regulates the organization and functioning of official statistics in Romania, the creation and coordination of National Statistical System and is meant to better set up the official statistics called to evaluate national policies and measure the results of the implementation of the national and local plans

Through this law the Romanian National Statistical System become a part of the overall European Statistical System.

- ***National framework***

One of the novelties that the law brings to the Romanian official statistics for the full harmonization with the ESS represents the possibility created for the existing statistical units within the framework of other producers of statistics to collect, produce and disseminate official statistics while observing the rules, techniques and standards applied in official statistics.

Thus, these statistical offices are authorized to:

➤ Promote and carry out the collection, processing and disseminating of statistical data in accordance with the needs of public and local authorities;

- Cooperate with other producers of official statistics to conduct statistical surveys planned in the annual national statistical programme;
- Participate in the process of harmonization of the informational national system in general and those regarding specific objectives of the departmental and local interest, in particular;
- Contribute to the objectives of reducing the burden of the data providers;
- Cooperate for the promotion and development of statistical information system, including statistical data file transmission in an interconnected system within the National Statistical System;
- Report to the National Institute of Statistics and to the public authority to which they belong, on their activities as a part of the annual report of the National Statistical System.

The activity and actions of the above mentioned departmental and local statistical entities is subject of the overall statistical coordination conducted and monitored by the national statistical institute.

The Romanian statistics are fully attached to the European Code of Practice and the improvement of the quality in official statistics representing one of the main priorities of the national statistical system.

While the quality concept in the national statistics had been initiated since 2005, for the implementation of Total Quality Management (TQM) as a moving target, 2011 constitute a deadline for reaching the goal.

The main mission of the institute aiming at quality management is to meet the statistical data users' needs and desires following the general assumption that quality means what is consumed by users and not what the statistical institution considers as most appropriate and adequate for users. A user tailored orientation is not, however, a sufficient condition for quality management. Statistical offices need well defined strategies in view to meet the above mentioned requirements.

Due to the current crisis, the issues raised in the statistics have taken a new dimension, which stands before statistical family, including Romanian statisticians, as a very delicate issue.

In this regard, a special attention should be paid to the content of macroeconomic indicators in such way as to better answer the scope of reflecting in an integrated manner both economic and social aspects of life.

As has happened in other countries, they can lead to things which can therefore become irreparable, can cause difficulties both at the governmental level, in decision, as well as at statistical level.

We concluded in Romania, as experts in other countries, that societal requirements represented by data users and especially governmental institutions, are confronted with major difficulties when taking decisions based on the existing conceptual framework of the macroeconomic indicators and more often they asked official statistics to complement them with other indicators particularly reflecting social and demographic sides.

The problem becomes acute when dealing with expectations of the statistics, the qualitative assessment of activity and with users' expectations, especially government users who are "with eyes" on statistics.

Thus, statistics is in a position to be the barometer of society, and in this context, there was a new challenge to what extent and how far the coverage of some of macroeconomic indicators, particular GDP, may goes from the point of view of amplitude and of quality.

Currently, there have to be pointed out two elements rather important for observing the economic evolutions which were not reflected within the macroeconomic indicators, namely:

- forecasting – as a very delicate domain not covered adequately by statistics on one side and on the other side it was overestimated by the commission in charge in Romania for making prognosis. Such discrepancy created confusions for the analysts and even for the decision makers and the conclusion that can be drawn was to accommodate conceptually the methods of prognosis with statistical approach from the quality and the timeliness point of view;
- the second element regards the economic analysis of the results - this is an issue that, in its turn, requires concomitantly the extension of the scope through a package of related macroeconomic and other indicators and concerns for insuring high quality of data while producing them more quickly.

- ***The crisis impact: need for co-ordination***

It is also necessary to highlight the difficulty occurred during this period of economic crisis, that any statistical office has been pressed to collect, process and disseminate information on the economic developments in a rapid pace which increased the risk of ensuring reliability of statistics.

The conclusion that may be drawn for statistics is that it has to move towards ensuring a better coherence approach vis-à-vis quality criteria, namely those of reliability and particularly of timeliness and compatibility between the official statistics on real economy and financial indicators.

While referring to the assessment of the implementation of the quality criteria for which an operational system of monitoring and information goes beyond the statistics approaching, namely the status of independence of statistics, in terms of science and in order to avoid government pressure, it has to be mentioned that statistics can not do much in this matter due to the fact that statistics, as other governmental bodies, are subject to budgetary restrictions and staff reduction. The problem becomes difficult or even impossible to overcome, taking into consideration that the measures mentioned above are applicable equally for all the budgetary institutions. Statistics is confronted with such effects even more than other domains, particularly in these last years, which from the budget point of view had to support an extra charge of the big amounts of complementary funding required by the population and agricultural censuses.

Under such circumstances, the Romanian official statistics, as it was explained above, decided to expand more and more their coverage area to other producers of official statistics. Coordination that had to be ensured by the central statistical office and even the task of supervising their activities is up to now a difficult mission, particularly due to the lack of sufficient staff and financial resources reduced up to 25 %.

There are currently conducted a number of joint activities with large macroeconomic impact, such as fiscal notification, but challenges can be extended to all area of statistics and participation in the development and design the annual and multiannual statistical work.

For the annual statistical work should be considered the design of the statistical tools, while maintaining the quality criteria, it should be simplified and reduced in terms of loading taking into account the fact that resources were reduced by 25%.

Another challenge regards the issues of confidentiality. Beside the fact that data users, researchers included as privileged ones, governmental bodies and others, like mass media require more and more detailed statistics that are covered by confidentiality . In this sense, it might be advisable to reconsider the issue of making the confidentiality aspect more flexible and less restrictive if better satisfy the users' needs.

Notwithstanding real difficulties that statistics have to cope with due to budgetary restrictions, the activity carried out within the National Institute of Statistics expanded the coverage, both in terms of statistical surveys and of measuring, especially in quantitative (numerical) terms, the challenges and the formulation of other *priorities that have to be taken on board in accordance with international recommendations referring to:*

- economic and social recovery, implicitly the evolution envisaging the economic crisis surpassing;
- the climate changes and the necessary actions meant to ensure sustainable Europe, in the perspective of accomplishing the objectives stipulated in Europe 2020 strategy;
- European citizens placement on top position: covers a wide range of topics, from public health to civil security and equal changes for men and women;
- Europe, as world partner;
- better regulation and transparency of the European Union Programme activities and objectives: simplification and improvement of regulation environment for enterprises and citizens was and still is a priority for the INS as well;
- reducing the response burden of primary data and information providers: the National Institute of Statistics has advanced and carried out a package of actions actually covering the whole topics incumbent through the legal framework, the programmes of assuming and transposing the European Union norms and standards in statistics, the global and sectoral statistical policies implementation.

- **Priorities**

In order to continue to carry out and expand its activities, in compliance with the governmental policy in the statistical field, the National Institute of Statistics has set itself a series of targets for the following period:

Romanian statistics has a wide range of priorities for 2011, with the aim of improving overall quality. Some of the most important are the following:

➤ Continuing the qualitative improvement of the existing statistical framework by:

- *absorbing and implementing*, to a high extent in terms of coverage and quality of the statistical process, the statistics-related Community acquis by implementing new statistical surveys, with the focus on attracting non-reimbursable European funds;

- *expanding and diversifying the data collection area and the solutions for collecting data* from primary information providers by:

- gradually replacing the paper questionnaires with electronic questionnaires that are mainly addressed to statistical observation units with legal personality, including by using the facilities provided by the web portal mentioned above;

- widely using administrative sources for statistical purposes and reducing the number of statistical surveys accordingly;

➤ The implementation, including at the level of the territorial statistical divisions, of adequate and efficient methods for the continuous improvement of the level of training in the statistical field, focusing on the new undertakings and developments at the European level:

- *creating an e-learning platform aimed at:*

- delivering intelligent courses adjusted to the level of the trainee;

- providing the trainee with the opportunity to learn at his own pace;

- monitoring the acquiring of knowledge, including through quick and relevant testing systems;

- *organising courses on official statistics* - courses aimed at broadening data users' knowledge, including that of the key persons within central and local administration;

- *connecting the National Institute of Statistics to the operational programme for the development of the administrative capacity* with a view to characterising the performance of local public administration;

➤ The need to timely provide relevant information that is required for monitoring the effects of the crisis from a statistical quantitative point of view; strengthening co-operation with the institutions that collaborate with the NIS in drawing up the fiscal notification (the Ministry of Public Finance and the National Bank of Romania) with a view to monitoring the evolution of the budget deficit and other economic and financial aspects;

➤ Expanding the statistical activities to the local and regional level, including by conducting sectoral analyses and profitably using the techniques and methods of determining small-area statistical indicators;

➤ Improving and harmonising statistics with a view to giving a coherent and realistic picture of the factors that influence economic growth; accelerating the release of the information on the effects of the crisis; approaching the content of gross and adjusted series from a methodological perspective; theoretical research and attempts to implement models for the summary evaluation of economic growth on the basis of composite indicators, with the assistance of the academic staff; extending time series;

➤ Rethinking the organisation of the National Institute of Statistics by rationalising data flows, improving the methods of collecting, processing, analysing and disseminating data, evaluating the quality of primary data, evaluating other objectives set out in the statistical programmes of the Commission and in the Annual and Multi-Annual National Statistical Programme;

➤ Focusing the efforts of the statistical staff on making better use of the statistical information and data; adopting relevant and reliable solutions in sensitive areas, such as the consumer price index and the inflation index, evaluating international migration in accordance with the EU standards, improving the surveys in the labour market field in order to capture phenomena and processes specific to the recession period and the

economic crisis, improving the monitoring of the evolution of real estate prices, perfecting the system that monitors the evolution of the standard of living, etc.

- ***Total Quality Management: Romanian'approach***

The National Institute of Statistics has developed and is currently implementing a multi-annual program and a strategy for implementing the Code of Practice. These actions of the multi-annual were also provided and the National Statistical Program

Within the framework of systematic quality management, the quality management basic principles were adopted by the INS, and, for 2012 is planned to carry out a self assessment, taking the EFQM / CAF as reference.

Since 2009, INS has developed Quality Guidelines for Romanian official statistics, inspired by Canada's statistical guide, which was released in the NIS headquarters and regional statistical departments and used as the reference base for statistics.

To monitor the quality of statistical surveys and inform users about their quality, a quality report was designed for users of statistical data. Its methodology was tested on a series of statistical surveys in various statistical areas and their implementation will start from 2011.

In a first step, the completion of these reports will be made for those surveys for which no standard reports are prepared as required by Eurostat, in order to avoid the overburden the statistical staff.

Based on the selected standard quality indicators, the methodology for NIS Quality Barometer was drawn up by NIS, in accordance with European standards.

For the beginning, one of the difficulties is that not everyone quality indicators can be produced for all statistical areas and its validity will be limited.

Self-evaluation and audit of the statistical survey quality is implemented in NIS by using DESAP checklist for almost five years. This enables surveys managers to assess their statistical research quality and to propose measures for improvement.

In order to improve all statistical activities, product quality and statistical results, the opinion of the statistical data users have an ongoing concern of the institute. In this respect, the NIS periodically carry out the s user satisfaction surveys, which collects their views on current activities and their future needs but currently unmet.

The results are analyzed and based on them proposals are made in order to improve our statistical activity to meet the needs of users of statistics, both in terms of quality criteria and the content of the statistical information but also for the diversification of the level of aggregation.

Thus, in May 2011, NIS has launched an opinion survey among users regarding their satisfaction degree.

Opinions will be collected over a period covering the second and third quarters of the 2011 year from users who consult or request statistical information from the dissemination departments and libraries of NIS headquarters and territorial statistical offices, and also by sending questionnaires to the various categories of users: central and local government, media, universities, etc.

INS has implemented another series of surveys, namely;

1. *Interviewer's Satisfaction Degree*, by which NIS gains knowledge on requirements and options of people responsible with collecting information for statistical surveys carried out by NIS, in order to improve the data collection flows. This survey collects information about non-response rate, availability of respondents, proposals to improve cooperation with respondents and so on.

2. *Staff satisfaction survey*, which aims to improve the human relations and work climate within the NIS network in the context of human resource management design system in accordance with the requirements of total quality management. The survey has collected information about satisfaction levels of staff, tasks allocating and volume of training activity, staff absence rate, staff efficiency, information flow, etc.

3. *Respondent's Burden survey* carried out among respondents to the surveys conducted by the NIS, was primarily aimed at improving data collection system for reducing the time for completing the questionnaires and the degree of difficulty of questions. The information collected by the survey were related to the

difficulty of providing information, time spent for completing the questionnaires, the degree of difficulty of the questionnaire, respondents perceived the need to provide data, etc..

Providing more complete information to the user and increase the transparency of the methodology applied was also made by the development of metadata base, which helps users quickly find the information they need and to interpret them correctly.

Using metadata base facilitates the access, exchange, comparison and understanding of statistical data.

The INS metadata base presents in a structured way the methodologies which constitute the base for statistical activities comprised in the annual Statistical plan and which are elaborated by the NIS or by the collaborating institutions.

The metadata associated to the statistical indicators describe each indicator by features such as: definition, statistical work in which is used or from which derive, data source, related indicators, end of time series, the formula used, and date of the most recent updates.

The link between indicators and statistical activities is interactive so the user can access related metadata to statistical work starting from a single indicator.

At the same time from a given activity can be displayed all statistical indicators, those who are interrelated and terms used in it.

Metadata associated statistical activities include all the key elements of the statistical process: the domain, the objective, purpose, type of statistical activities, national and European legal framework, scope, statistical population observed, the collection mode of information, frequency of activity, manner and periodicity of release, the beneficiaries of the results, classifications used, methods of measuring quality outputs, duration of activity, background and the responsible institution for its implementation, cooperating institutions, etc.

Another action under multi-annual plan for the quality management is the extension of the metadata system by including in it the information on quality and quality indicators.

Full implementation of the ESMS in the ESS will contribute to meeting the requirement as stated in Regulation on European Statistics by generating more complete and more harmonized information on the quality of the statistics for the users.

In view to achieve a wider promotion the Code of Practice among other producers of official statistics and to improve the collaboration with data suppliers, NIS has establish a regular communication and information exchange with other European producers of statistics. In addition to the information sent by email, regular information meetings are planned with regard to new ways of cooperation at national level in terms of providing data to the ESS, taking into account the new Regulation on European statistics (Regulation EC Nr. 223/2009 on statistics Community).

- ***A tool for quality improvement in statistics: Web portal for on-line data collection***

One of the important achievements of the National Statistical System is related to the creation, testing and implementation of the project “Web portal for the on-line collection of statistical data”.

The need for and importance of the project, which is generically called e-SOP (e-Survey Online Portal) results from:

- the need to reduce the gap between the collection of statistical data and their dissemination;
- the unification of the two stages that make up the life-cycle of a statistical survey, i.e. the collection of data in the field, from reporting units, economic and social operators and units or households, using statistical questionnaires and forms, and the entry and validation of the data from the statistical questionnaires and forms;
- the WEB technology is more and more present in all activity sectors;
- the lack of IT staff specialised in Web technologies within the NIS. It is worth mentioning that the NIS Division for the Design and Maintenance of IT Applications has 34 positions in its structure, of which 20 are vacant positions, mainly because of the rather small salary of the entire staff within the statistical system, a salary that was diminished by 25%;
- no financial funds necessary for outsourcing the design of Web applications were identified;

- the positive Intrastat experience, a statistical survey that does not use paper in the reporting of statistical data;
- in the last 2-3 years, at the request of the reporting units, electronic questionnaire solutions were developed by the NIS specialists using EXCEL solutions.

The “Web portal for the on-line collection of statistical data” project involves not only a solution for the on-line entry and validation of the statistical data from the statistical data providers but also a new IT architecture, servers, communications equipment, licences, on which the e-SOP IT solution can be properly executed. Moreover, the project makes available a network monitoring system and an automated help-desk solution that almost instantly deals with potential hardware and software incidents within the statistical IT system at national level.

20 statistical surveys, different in questionnaire content and form and of different complexity, were identified. A five-year plan for on line data collection for almost all statistical survey was prepared by NIS.

*Normally, there are many things that need still to be approached as far as the quality management is concerned, but it is worthwhile mentioning that efforts made up to now by the Romanian statistics allows to play it through the national institutions which reached notable progress reflected by an important increase of its credibility in the society universe of data users.*