

Redesigning national statistical systems: driving forces and response

National Institute of Statistics/ Romania: objectives and challenges

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*The paper is elaborated under the recognition of the fact that **statistics is necessary** since, due to its status, it decisively contribute to knowledge and decision making.*

H.G Wells said and remained as a flash of wit “one day, statistics will be as necessary for the human being as writing and reading”. That is one of the reasons why Romanian statistics was reconsidered on natural, objective grounds.

Short itinerary in the history of the Romanian statistics

The National Institute of Statistics/Romania will celebrate in June, 2007, **148 years of history**. Official statistics were in place in 1859. If we have to recount history, one should remember that in 1857, at the Vienna Congress, a prestigious Romanian statistician noticed, unhappy, that the Romanian statistics of that time did not surpass the empirical phase. The official statistics was set up in France (1801); in Italy (1805); in Austria (1810); all the European states have been represented from the point of view of the official statistics. Only the Romanian governments did not succeed at that time to demonstrate that they were of European structure. On the basis of these bad statements, new ideas born that led to the setting up of the setting up of the Romanian official statistics.

This is old history.

The **new history of statistics** is related to the end of 1989. The process of adapting the Romanian statistics to the EU standards started from scratch. After December 1989, Romanian statistics regained the virtues of a modern statistics, complying with the international norms and standards, aiming at obtaining comparable statistical data. The preponderantly exhaustive surveys carried out during the years previous to the Revolution were mostly replaced with sample surveys, which imply a special scientific rigour on the information producer side, wider specific knowledge on the statistician side and, at the same time, a statistical culture of information user and provider, in view to perceive their values and to use them in their undertakings.

Since that moment, a lot of difficulties and challenges were faced.

If one would like to make an inventory of various milestones of statistics starting with 1990, this should include the following:

- 1992: Government Ordinance on official statistics functioning (subsequently approved by Law in 1994);

- 1992: Common Declaration between Eurostat and seven countries in transition (among which, Romania);
- 1994: bilateral Common Declaration between Eurostat & INS/Romania;
- 1996: the reply to the first questionnaire from the to Ministry of the European Integration (a detailed self assessment of the Romanian statistics);
- 1998 & 1999: two screening exercises took place: one multicountry and one bilateral with the European Commission experts;
- 2000: chapter 12 of negotiation on statistics in the *acquis communautaire*, meaning that Romania complied with EU norms and standards, without requesting any derogations or transition periods;
- years of Phare Programs (National & Multicountry) assisting the Romanian statistics development resulted in progresses towards sustainability of the system;
- years of being observers in the working parties task forces, seminars, conferences in Eurostat, through which we learnt a lot not only from Eurostat, but also from our colleagues from EU Member States.

Nowadays, the Romanian statistics is integrated in the decision making process and deeply involved at the international and European level. As an arch over time and over cooperation matters dealt by INS/Romania, since 2006 the institute turns to give technical assistance to other countries needing this, such as: Turkey, Georgia, Armenia, Ukraine, etc.

Brief overview on achievements

Should one have to give a synthetic overview of the Romanian statistical achievements, one would have to cite the Latin saying “*citius, altius, fortius*”, i.e. “*faster, higher, stronger*”.

- **Faster**, as the works were carried out, shortening the available time interval from statistical data collection and processing to the moment when they are put as users disposal;
- **Higher**, as the quality of the statistical production has been improved; nowadays is issued with a wider, more diversified and friendlier content in terms of accessibility and clearness, as well as in terms of presentation means. **Higher**, as the rigorous scientific level of the statistical papers increased through a symbiosis never reached in the past between official and academic statistics;
- **Stronger**, as the statistical infrastructure consolidated, and the relationships with partners, as data providers, producers or users strengthened. **Stronger**, as more transparently and more visible the image of Romanian statistics was promoted.

All the above statements do not want to create the impression of reaching the highest level of the possibilities and of the society expectations from statistics and statisticians. The Romanian statisticians are aware of the fact that the threshold of knowledge and involvement which is to be pass over the next years will be more and more higher.

Priorities and projects of the National Institute of Statistics (INS)/ Romania

Among the major challenges for INS, the following are to be mentioned, without bearing in mind a certain prioritisation:

- It is worth mentioning that in the past, statistics enjoyed certain prerogatives, which were lost under the current circumstances. For instance, the easiness of collecting statistical data, as consequence of a mandatory character to supplying information to the statistical office. Though still obligatory, data supplying by respondents is no more imposed with the same intensity. **Data collection is a more difficult and expensive process and the system has to be reconsidered on the long run, in view to reduce at minimum the parallelism and the redundancy of obtaining information from the same primary data provider** and to simplify the manner of collecting data, diminishing the burden of data provider in terms of filling in the questionnaires.

In the countries with developed statistics, data collection systems, generically called CAPI and CATI are used on a large scale, meaning, in the first case computer assisted collection of information and their electronic transmission for processing purposes, respectively their collection through the telephonic network.

The INS/ Romania has already started and continue **to use modern methods for collecting information** on the use of agricultural areas, namely the use of remote sensing and of the geographical information system (GIS). In this field, Romania already achieved notable performances.

- When mentioning certain prerogatives which existed in the past, we also referred to the fact that statistics were not exclusively achieved by the central statistical body. It was also complementarily functioning the so-called system of departmental statistics, according to which certain statistics of special interest were collected, processed and aggregated by various ministries and by other institutions. Without assessing the quality of such information, it should be said, however, that they filled a gap that central

institution was not able to fill in. Nowadays, INS is facing the situation where, due to the lack of specialised statistical departments in various institutions, the request for data at a higher level of detail and at short notice is almost exclusively the task of the National Institute of Statistics. One of our concerns in view to overcome this handicap is consequently directed towards **widening the use of the so called administrative sources for statistical purposes.**

- Likewise, INS is facing **the challenge of harmonising the statistical quality criterion with the one of timely disseminating statistical data** quality versus timeliness. The choice between an *improved statistical quality* versus *a more timely statistics* is difficult. The option and naturally the envisaged measures lead to the harmonisation of the two components of quality management in statistics. While for long statistical data series, such as those published in the Statistical Yearbook or existing in the databases, quality is a key issue, for the short-term data series, timeliness is crucial. As consequence, the concerns are related to reducing the main statistical processes duration, setting up the statistical tools (methodological norms, questionnaires), training of field operators, data collection through statistical questionnaires, designing IT applications, electronic data processing, statistical analysis and data validation and finally dissemination, so that, as a whole, the period from starting preparatory activities and data collection till the dissemination of results, should be as short as possible.

- Sustained efforts are made **to keep the pace with the developments of the statistical Acquis Communautaire.**

- Facing problems related to the large volume of data requested by users of statistical information, including issues related to the improvement of data quality, INS/ Romania is taking into account, and it is already in a project stage, the **development of specific fields** dealing with:
 - the strengthening of institutional capability of the National Institute of Statistics (relationships with media and with the public at large);
 - upgrading the statistical infrastructure as a factor for data improvement;
 - harmonising and improving statistics on information society and the new economy;
 - developing new modules in the domain of social statistics for widening the investigation on new social life aspects;
 - developing services statistics;

- continuing the process of improving national accounts system, particularly the satellite-accounts segment (environment protection expenditure) and implementing flexible structures, such as social accountancy matrix.

All the efforts stem from the taken over of the responsibilities to professionally and timely meeting the future economic and social commandments. Under this vision, INS already initiated actions meant **to improve the organisational structure** that will be able to better direct the activities towards ensuring efficient information flows at users' exigencies level.

Difficulties faced by INS/ Romania in achieving its strategic objectives

There are **two major categories of difficulties**:

- a) The first category of difficulties relates to the necessity of organisation of actions leading to an improved statistical management and statistical methodologies;
- b) The second category of difficulties relates to the collaboration with central and local authorities. Among them, the following were identified:
 1. For organisational reasons, statistical departments (nuclei) were removed from certain ministries. This fact entails difficulties in: inquiring administrative data sources; technical data supply; ensuring the convergence of data transmission to various domestic and external users, on various channels, etc.
 2. The long lasting process of improving statistical legal framework for large scale statistical surveys, compatible with those practised by EU Member States, to which INS joined through international programmes.
 3. Ensuring enough skilled staff.

Statistical data reliability – prerequisite challenge

We shall tackle in more detail the issue of statistical data reliability as a core challenge statistical office has to face. There are several factors to take into account when reference is made to confidence and reliability, namely: the contents of evaluated concepts; the evaluation methods and factors' contributions; coverage; data sources, etc. Only a scientific undertaking that takes into account the above mentioned factors could result in conclusions related to confidence and scientific reliability. The Romanian statistics is very much concerned about this undertaking, since reliability is one of the core criteria, maybe the most important one, when assessing the role played by statistics in terms of knowledge and the extent to which it rigorously and professionally serves the society.

The extent to which statistics is able to meet, the information requests coming from data users is basically given by global or specific assessments of statistical quality made by all user categories: the administration, to which political personalities belong; economic operators; university-academic environment; scientific researchers in economics and in other fields; media and public opinion at large.

The range of eventual criticism and reserves comes from various user categories, but particularly from those currently using statistics in their activity. As consequence, they have a heterogeneous nature. While the representatives of university-academic environment and the scientific researchers express their criticism mostly related to the volume, data breakdown and accessibility of statistical data, other user categories mainly refer to data relevance, information quality, accuracy and timeliness in accessing statistical data.

In the first case, there are usually involved user categories with better knowledge on statistics, familiarised with methods and techniques of statistical data collection, processing and aggregation, also knowing that the tools used by the official Romanian statistics comply with the international norms and standards, though having, at a certain extent, the capability of showing the specificity of processes and phenomena taking place at national level. In the second case, statistics could face various aspects, entailed for example by, an insufficient statistical culture allowing them to understand statistics as an instrument for aggregation and generalisation, particularly through the statistical average of individual characteristics within the surveyed population. Naturally, there are certain user categories that unfortunately ignore the assimilation of statistical knowledge, as consequence of a lower educational level, but that unconsciously take part in this process, since the qualitative assessments, in one way or another, characterise all the active members of the society, though many of them are not in the situation to estimate statistical data variation.

The so called sensitive indicators are most frequently subject to criticism and reserves. These indicators are of a legitimate interest in assessing the dynamics of economy as a whole, particularly they give the statistical quantitative expression of social phenomena evolution. These indicators cover a wide range, starting with the macro-economic ones – gross domestic product, industrial and agricultural output, economically active population, employment (especially the weight of people employed in agriculture and services) and ending with those specific to the social field – unemployment rate, consumer price index or inflation, structure of family expenditure, income level, social behaviour, a.s.o.

Many times, when expressing doubts on a certain statistical data, there are also made statements related to methodological incoherence or to a presumed erroneous application into practice

of certain methodologies, techniques or standards of computing indicators, but also references, related to statisticians professionalism or competency, that are supposed to be to the origin of eventual statistical errors.

It is well known that in the past statistics had to face consequences of pressures from political side, sometimes with dramatic effects upon statistical indicators. After December 1989, Romanian statistics made the decisive step towards its reintegration to the recognised values of world statistics, particularly through sustained efforts of assimilating the methods and techniques used in the European Statistical System, characterised by the application, under comparability circumstances, the European norms and standards, known as “statistical Acquis Communautaire”.

As consequence, Romanian statistics was compelled to the imperative of complying with international standards and data comparability, to adhere not only to the statistical computation systems, but also to the statistical principles, recognised and applied in democratic countries: relevance, transparency, individual data confidentiality, proportionality, efficiency and statistical deontology.

It is clear that, within such a complex activity as the statistical one, practically covering, in terms of quantity, all fields of economic and social life, some difficulties and disparities could occur, sometimes even errors, entailed by incomplete statistical methodologies, maybe insufficiently elaborated; improper organisation of data collection system; sometimes, representativeness errors or alike which are however identified at due time and corrected, under a process of thoroughly analysing applications, solutions and techniques in use. Chapter 12 “STATISTICS” was not by fortune opened and provisionally closed in the process of negotiating Romania’s accession to the European Union, but due to the fact that statistics could prove the fast assimilation of the necessary knowledge and to its capability of complying with the statistical Acquis Communautaire. This was also urged by the fact that the negotiations for all the other chapters were implicitly determined by the availability of harmonised statistical data, comparable and pertinent for the respective fields.

As a follow up, since statistics reliability is a core element, this objective became a concern in all stages of the statistical undertakings. Certain measures have been already adopted, but some other are to be further initiated, aiming at:

- a) *refining statistical methodologies*, in view to reach conformity not only with the global criteria and characteristics of the Community statistical system, but also in meeting the highest exigencies of their application into a modern, advanced statistics. At present, the National Institute of Statistics has a proper technical endowment, with

high- performing equipment, but also, maybe more important, it has a well trained and competent staff.

- b) *intensifying statistical management.* There is a system already implemented in the INS statistical practice that envisages the application of statistical quality management, according to the pattern defined and recommended by Eurostat to Member States and to Candidate Countries. In accordance with this system, the statistics quality as a whole is monitored based on certain models, techniques and norms of the statistical process. Currently in an experimental stage for certain fields, its extension is foreseen, as far as possible, to all statistical fields, so that information quality and timeliness of offering information to users would increase.
- c) a system of continuous training of INS staff was set up through the National Centre for Training in Statistics (subordinated to INS/ Romania), with special access offered for the own staff, but also opened to various persons (economists or statisticians) outside the statistical system.
- d) the above mentioned topics envisage present and future training sessions depending, at a large extent, on what the National Institute of Statistics and statistics in general – should do in order to improve the statistical data quality. At the same time, measures are also envisaged aiming at an increased statistical reliability, by exercising a more consistent lobby for statistics, adopting a statistics brand conferring to it the attribute of being firstly known as such and secondly of being recognised as a prestigious institution, whose products are serving the Romanian society. In the same context, further efforts are to be made for reaching an increased accessibility of statistics, extending the statistical culture as an element of knowledge, not only for a restricted circle of certain statistical data users, but, as far as possible, for the whole society, since no undertaking of macro or micro economic policy and no other activity could be nowadays conceived without an appropriate documentation, consequently without options substantiation based on statistical data. Here could be framed the concerns of diversifying the area of statistical publications, including the ones of methodological nature, which would be presented in a simple, user friendly form, but also coherent and clear for those who are not necessarily having knowledge on statistics. The statistical data users are to become aware that the results of any statistical surveys, either exhaustive or on sample basis (particularly the sample surveys) are always estimates. Statistics could never be precise, in any country. Nevertheless, the core prerequisite is that the plausibility of its estimates should be the closest to reality. As consequence, statistical quality is given by the error margin on which a statistical figure could be accepted as true.

Under the current globalisation circumstances, where statistical methods and techniques are no more exclusively domestic, but are framed in the range of concepts adopted at the international level as standard methods and techniques, the core objective of statistics from various countries, including Romania, is to observe as exactly as possible the scientific rigour of methodologies drawn up and adopted at international level. Therefore, the answer to the rhetorical question on eventual changes that are to be operated in relation with the computation methodology for certain macro-economic indicators could not be another one that Romanian statistics should follow exactly the international recommendations and should try to ensure the most pertinent and viable data sources, allowing for multiple checks and for permanent tests of results in the process of data validation.

As for the way of computation of statistical indicators in general, including the macro-economic ones in particular, Romanian statistics received positive appreciation from international bodies. We are using in Romanian statistics the same methodological concepts with those used by the other EU Member States, as well as by countries with developed statistical systems outside the European Union, the same techniques of assessment and estimation, the same data sources, taking into account the available ones, the same control, correlation and validation methods, as well as the same way of data dissemination. The Romanian statistics is to be found in the databases of the international organisations.

For an institution whose core objective is to inform all user categories, beginning with central and local governments to the public at large, **visibility and transparency are** not a sine-qua-non condition for a successful activity, but the only condition and mission for functioning as a basic instrument of the State.

The INS/ Romania reinforced the relationships with all the main actors involved in the statistical process, meaning information providers, administrative bodies, business environment, media, other statistical data producers.

The press conferences regularly organised turned statistics into account, in its position of science, on the one side, and of practical activity, specific to official statistics, of disseminating statistical data and information, on the other side. At present, there are more positive appreciations on statistics, less criticism and, a taking over of statistical information without collateral comments, thus certifying our reliability and making people aware that what we are doing is useful, indispensable for the society as a whole, for knowledge and decision making process.

Naturally, such positive attributes attached to our activity are the results of our joint efforts aiming at the improved quality of data and information produced by us, ensuring the timeliness and understanding the requirements of statistical data users, finding the ways to facilitate the interpretation of the complex statistical tools, generated by the diversity of methods and techniques that we apply, joining the international context of ensuring statistical data comparability.