

Towards a system of supervisory and control for national accounts

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Abstract: The positive achievements in the research of quality standards of statistics and the corresponding processes are a well-established practice in the national statistical systems of the developed countries. Despite the internal situation of the statistical system of each country, the European institutions show consideration to the need of assuring quality of national accounts estimates and of Gross National Income (GNI) that play a prominent role in calculating the contribution of Member States to the EU budget. The periodical control visits for statistical quality assessment performed by important institutions like the International Monetary Fund (IMF), the Gross National Income Committee (GNI Committee) and the European Court of Auditors (ECA) have given impulse to some of the activities towards the implementation of a more complex supervisory and control system. The aim of this paper is that of providing information on the international activity regarding the definition of a supervisory and control system for national accounts, highlighting what has been done, in Europe as in Italy, and giving some insights on possible future developments.

1 The need of a supervisory and control system for national accounts

Annual national accounts play a fundamental role in the examination of many key policy questions for the European Union. They provide key economic and monetary

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policy indicators and basic information for the own resources system², the regional and structural funds, the excessive deficit procedure, the growth and stability pact.

Due to their role in European economic and budget policy, national accounts data are controlled by some relevant international institutions like the International Monetary Fund (IMF) and the GNI Committee. These institutions perform their external audit using standards for mainly analysing the quality of methodologies and of the estimates produced. Furthermore, since 2004 the European Commission has asked to the European Court of Auditors (ECA), whose main task is that of providing the financial audit for the European Union accounts, to give a Statement of Assurance (DAS) in relation to most of the EU expenditures. One of the tasks of the European Court of Auditors is also the exam of the main supervisory and control systems of Member States for the notification of GNI data within the system of European own resources. For the above reason, the Commission has launched its '*Action plan towards an Integrated Internal Control Framework*' which aims to ensure that supervisory systems and controls are in place to keep the risk of illegality or irregularity in underlying transactions within reasonable limits and to provide the Court of Auditors with reasonable assurance to that effect³.

In the above context, since 2006, the GNI Committee has started to discuss the introduction of supervisory and control systems related to national accounts with the Member States aimed at verifying the GNI estimates for the calculation of the fourth resources. A new impulse towards the implementation of supervisory and control systems for national accounts is represented by the final results of the Workshop on supervisory and control systems organized by Eurostat in 2009.

The application of general supervisory and control systems is not easy within the statistical institutes and especially in national accounts. The difficulty is due to the high level of integration of different sources of data, the numerous different methodologies applied and the complexity of the conceptual framework that makes complicated to document all the phases of the compilation process.

In Istat efforts towards the application of quality criteria started in the nineties and received new impulse since two thousands. This process involves also the National Accounts Directorate where the impulse has been provided by the periodical visits of international organizations, and recently by the cited workshop organised by Eurostat.

1.1 The IMF, Eurostat and European Court of Auditors

In 2006 the International Monetary Fund (IMF) carried out a mission in Istat finalized to assure the observance of standards and codes in some relevant statistical

² National Accounts data play a prominent role in calculating the contributions by the Member States to the EU budget. For the VAT-based 'third' resource, Member States' VAT receipts are adjusted using detailed national accounts data to correct for the fact that countries do not all apply the harmonised EU VAT rules, having different rates and coverage of products. Furthermore, Gross National Income constitutes the basis for allocating the GNI-based 'fourth' resource.

³ The Action Plan includes 16 actions under four broad themes aimed at simplifying and harmonising control practices, via information sharing and the use of a 'single-audit' approach to better target the limited available resources.

areas, according to their Data Quality Assessment Framework (DQAF). The following four statistics were scrutinised during the mission: 1. National Accounts; 2. Consumer Price Index; 3. Producer Price Index; 4. Government Finance Statistics. The results have been published in the *Report on the Observance of Standards and Codes (ROSC)*⁴. It contains a detailed assessment by dataset of the elements and indicators that underlie the data quality dimensions⁵.

The quality of the national accounts statistics is also subject to scrutiny by the EU. A special role in this respect is played by the GNI Committee, which is made up of statistics experts from all Member States; it formulates opinions on the quality of the national accounts estimates reported by the national authorities and may also give recommendations.

According to the GNI Regulation, the Member States provide Eurostat with figures for GNI and its components (for the preceding year and any changes made to the figures for previous years) before 22 September of each year through the GNI Questionnaire. Data have to be accompanied with a report on the quality of the GNI data, named Quality Report. The main purpose of the annual GNI quality reports is to provide information on cases where there have been significant changes to and revisions of the Member States' GNI calculations. The quality report is therefore intended to give a brief and concise update on a Member State's methodology, sources and results where necessary⁶.

Together with the GNI Committee, Eurostat verifies the reliability, comparability and exhaustiveness of the data provided each year by countries⁷. One of the main instruments enabling Eurostat to assess the comparability, reliability and exhaustiveness of the Member States' GNI data are the Inventories on sources and methods used to calculate GNI and its components. The inventories also include Process Tables showing figures for each of the steps leading from basic statistics to final estimates. As a general rule, countries update their GNI inventories at least every five years.

GNI Inventories and Process Tables are checked by Eurostat using the GNI Inventory Assessment Questionnaire (GIAQ) approved by the GNI Committee. The purpose of the GIAQ is to ensure a systematic, consistent and fair approach to the assessment of the quality of GNI data. More in-depth assessments are carried out by Eurostat organizing direct visit in the European countries in order to investigate methodologies, sources of data and the respect of the ESA basic concepts and definitions, starting from the Inventory, the GNI Inventory Assessment Questionnaire (GIAQ) and the Process Table already compiled by the country. Istat received two visits till now, the last dated November 2009.

At the end of this analysis, Eurostat provides an assessment on whether the Member States' figures are appropriate for the calculation of own resource or whether further corrections and improvements are necessary. The assessment reports are presented to the GNI Committee for a full discussion.

The Commission's work on controlling and verifying the Member States' GNI data is thoroughly examined by the European Court of Auditors on an annual basis. A

⁴ The report is available at the website <http://www.imf.org/external/pubs/ft/scr/2007/cr0787.pdf>

⁵ The issues analysed by the IMF were the following: legal and institutional environment, resources, quality awareness, assurance of integrity, methodological soundness, accuracy and reliability, service ability (timeliness, consistency, revision policy), accessibility.

⁶ International Monetary Fund (2006), Italy - Detailed Assessments Using the Data Quality Assessment Framework (DQAF).

⁷ Together, the VAT-based and the GNI-based resources represent about 80% of EU budget receipts.

detailed account of the Court's activities with respect to the GNI own resource can be found in its Annual Reports on the Implementation of the Budget.

The ECA examines whether the financial management of the European Community has been sound and whether the activities have been performed in an economic, effective and efficient manner. The ECA opinion is annually published. To this end the Court issues a Statement of Assurance, which is generally known by its French acronym DAS (Déclaration d'Assurance). The DAS is the Court's formal opinion on the reliability of the EU accounts and on the legality and regularity of the underlying transactions⁸. One of the task of the European Court of Auditors is the exam of the main supervisory and control systems of Members States for the notification of GNI data within the system of European own resources.

In view of the importance of the GDP estimates for the financing of the EU, in 2009 the European Court of Auditors visited Istat for an audit concerning the calculation of the own resources in relation to the assurance declaration (DAS) for financial year 2008. The visit had the following objectives: 1) general analysis of the internal control system of the Italian Directorate of national accounts; 2) specific analysis of the internal control system of the national accounts Directorate and the control of other auditors; 3) exam of the documentation, control files and internal dossiers for the analysis of the GNI data.

1.2 The experiences of the national statistical offices in the European Union

A supervisory and control system can be defined as a standardized assurance process finalized to improve effectiveness and efficiency of an organization. It produces the following main aims: 1) assisting the management in the scope of assuring the achievement of the objectives; 2) knowing, monitoring and managing the internal processes and the related risks; 3) providing a control of all the internal organizational issues (processes, resources, responsibilities, results).

In April 2009 Eurostat included in the GNI Inventory Assessment Questionnaire some questions on the application of supervisory and control systems. The investigated areas were the following: (a) the performance of a formal and structured risk analysis; b) the existence of agreements or equivalent arrangements between National Accounts departments and units providing basic statistical data, which set out the conditions for the delivery and the quality of data; (c) the systematic production of quality reports accompanying statistical surveys; (d) the documenting of supervisory controls performed by management on National Accounts compilation; (e) the performance of internal audits on the process of statistical data collection and compilation. Only a small number of countries have provided information.

In the same year the Court of Auditors carried out its audit activity in four Member States, examining key components of supervisory and control systems. From the

⁸ Its aim is to provide stakeholders, mainly the European Parliament and the Council but also EU citizens, with an audit opinion on whether EU money has been properly spent in accordance with Community law and reliably recorded in the annual consolidated accounts of the European Communities.

Annual Report (DAS, referred to 2008 financial year) resulted weaknesses in the documentation of the procedures for the production of this data, that checks on the quality of statistics were not systematically documented and/or that the evaluation of the systems underlying statistical production was not always carried out.

1.3 The Eurostat Workshop results

Following a discussion started in the GNI Committee, in December 2009, Eurostat organised a Workshop on 'Supervisory and control systems for national accounts purposes' inviting the Internal Audit Service of the European Commission and the European Courts of Auditors and Member States.

The purpose of the workshop was mainly to exchange ideas and best practices towards the definition of guidelines for Supervisory and Control Systems in National Accounts, considering the results of the audits and visits performed by Eurostat and by the European Court of Auditors in Member States. Eurostat introduced the workshop specifying that internal control is designed to assist organizations in achieving their objectives. The following considerations have been highlighted: 1) quality of national accounts data is mainly related to sources and methods; 2) organizational environment impact on quality of data; 3) responsibility of organizational environment is the own responsibility of National Statistical Institutes.

The Court of Auditors has identified the main components of the systems for statistical offices and for national accounts too. According to the Court, possible **supervisory systems** which might be implemented by the management are:

- ✓ (Documented) risk analysis and management,
- ✓ Evidence of supervision,
- ✓ Reporting to the senior management on the statistical outputs,
- ✓ Assessment made by the internal audit service on the operation of controls.

Possible **control systems** which might be implemented by staff of units/teams are:

- ✓ (Documented) production procedures of the compilation process,
- ✓ (Documented) control procedures,
- ✓ Documentation on the verification of the data quality,
- ✓ Review of the compilation systems (IT and/or methodological aspects).

Some Member States participated to the workshop with contributions mainly focused on few areas showing that numerous countries have experience on quality assessment but only a few of them adopts an explicit supervisory and control system. What emerged was the complexity of supervision and control systems for national accounts. It has to account for the main blocks of its structure represented by sources, methods and the information technology environment. In order to validate data and processes, some instruments of control exist and are applied. The main documentation instruments adopted by all the Member States are: the GNI quality report, the Inventories and the Process Table. The first instrument is yearly updated while the other are not.

On the base of the debate, a first list of areas where to deepen the definition of a standard supervisory and control system for national account emerged. A first domain is the monitoring of sources for national accounts through laws, specific acts, agreements among statistics producers and users, allowing to plan and manage the set of information needed to elaborate national accounts. Then a second domain is the

preparation of quality reports on sources by producers. Another important domain is the data validation performed by national accountants. Then, an important issue to develop is the identification of risks management for national accounts (human resources, IT resources, documentation, knowledge transmission and possible sources of mistakes). Another important area is represented by the set of measures and instruments that the management can implement for the assurance of data. Last but not least, the internal control. In particular future actions should focus on the definition of all the steps of risks management: 1. processes analysis that requires knowledge, documentation and monitoring; 2. Identification of risks; 3. Definition of control systems; 4. Definition of actions for risk management. A few of the above steps have just been implemented by the Italian national accounts as described in the next paragraph.

2 The Italian experience

The increasing number of external audits for different purposes, stimulated Istat to implement a system for monitoring the compilation process of national accounts. It enables to identify suppliers and customers of each statistical product involved in the process, the activities linked to each process, the corresponding input and output data, instruments for quality analysis of the data, tasks and responsibilities for each activity. Final aim is that of identifying warning and avoiding possible risks that could influence the quality of final data. At present, the existing elements of a supervisory and control system are described in the following three main blocks.

(a) General context for quality control

The professional independence of Istat is supported by the Italian Statistical Law (Decree N. 322 of 6/9/1989) and applied in practice in its institutional relations. Italian statistical law organizes ISTAT as a legal person governed by public law with autonomous regulation. It also gives ISTAT the task to draft the National Statistical Program (NSP) and to publish and disseminate the data analyses and studies produced by the Institute or other offices of the National statistical system (SISTAN). The Decree also establishes the Commission for the Protection of Statistical Information, an independent body set up to ensure the impartiality and completeness of the information produced under the National Statistical Program, which is defined by all the institutional representatives of the SISTAN.. In addition, the Commission reviews the quality of methodologies and techniques, as well as compliance with EU law and the recommendations of other international organizations.

Istat internal quality control system has been defined in accordance with Eurostat quality definition and standard indicators for assessing survey quality, in respect of the European Code of statistics. Istat has also realized an internal system to monitor the collection of statistics named the Information System for Survey Documentation and Quality Control (*SIDI*). This system manages both qualitative information and quality indicators related to each phase of the statistical surveys. The interest of Istat on quality is proved by the institution of a special Unit "Audit for quality" whose aim is to conduct audit on statistical processes in order to certificate quality of methods, procedures and technologies in the different steps of the statistical process.

(b) Formal Service Level Agreements (SLAs)

Every year the Institute plans the activities for the exchange of data with other external statistical providers. Each SLA permits, in particular, to plan the computerized

exchange of the information available in each archive. In order to assure the respect of the agreements, specific committees of coordination are established with the tasks of identifying the activities according to which developing the co-operation and the definition of the final goals. Each Committee assures the development of the technical-scientific functions as established in each agreement, providing a plan of activities in which data exchanged are identified and the releases of data and aspects connected to quality information defined.

Agreements for the supply of data from other statistical areas of the Institute are defined on the basis of official letters generally sent some months before the end of the year. Such letters contain a description of the statistical products and services that are needed for national accounts purposes as well as the timely delivery of data. At the moment, the internal SLAs do not ask for compulsory quality report to be sent together with the data.

(c) Internal checking procedures

All procedures for the compilation of national accounts estimates are documented, stored and constantly updated. Checking procedures are designed in order to avoid any risk and to assure general and exhaustive consistency in the estimation of all aggregates, especially the components of GNI questionnaire.

IT applications used for the system of national accounts are developed according to the standards established by Istat. As far as information security is concerned, Istat has adopted a general security policy for granting confidentiality, integrity and availability for all data managed inside the Institute.

According to the organization of the Directorate, the estimates of each component of GDP are subject to a sequence of controls. First of all, an assessment on input data is firstly performed by a specific Unit which deals with quality analysis, validation and implementation of data sources for all the Directorate.

The outcomes of each procedure are progressively validated through the calculation of specific indicators, which allow the control of longitudinal and structural coherence. Results are listed in a standardized format, where they are compared with input data and trend of time series are shown. A further control is performed by each Head of Unit, who makes random checks on the procedures and analyses the preliminary results. Then the outcomes are extensively discussed in periodical meetings chaired by the Head of the Division involved, who checks the overall consistency of the estimates produced and their compliance with some relevant macroeconomic indicators. A consistency check is, then, implicit in the system of compilation of the supply and use tables, allowing some major incoherence to emerge.

At this point an extensive review of each component of GDP is performed in periodical meeting involving the whole Directorate, chaired by the Director, where preliminary estimates are discussed, consistency between resources and uses is checked and procedural aspects are evaluated. This control phase is supported by a specific IT procedure, updated in real time, accessible by everybody inside the Directorate, whose output, available on a specific website, shows detailed information and indicators on the overall framework of annual national accounts estimates. Checks on the final results are also assured by the procedure providing detailed data on the integration of value added due to the underground economy.

As a result, questionnaires are consistent in all the different domains: annual and quarterly based, national and regional, by industry and by institutional sector.

3 Conclusions and future developments

Requirements for national accounts are changing at a national and international level. In particular, the institutional environment is highly regulated: the number of the external audits is increased as the request of high quality statistical products and services. The way towards the introduction of the quality management system is inevitable and it must be part of a more general system of supervision and control of the Institute where responsibilities are identified and risks analysis performed for each Directorate.

In the meantime, the management of the National Accounts Directorate can start to improve its supervisory and control system starting from the instruments already existing (as described in paragraph 2). The main effort should be the organisation of these instruments into a structured supervisory and control system. This requires an accurate description of the national accounts compilation process. In this regard the National Accounts Directorate should complete the ongoing activity of process description and accompany it with the performance of a regular and comprehensive analysis of potential risks in the main data sources and methods. Risk analysis implies that, for each step of the process, the potential risk, the impact if it occurs, the likelihood of occurrence, the actions for risk prevention and the responsibilities for each risk are adequately identified. Once risk analysis has been performed, the supervisory and control system can be completed by the identification of the actions aimed at managing and minimising these risks. Relating to this phase some existing instruments can be improved, while others should be developed.

One of the possible improvements concerns SLAs. The existing set of agreements or equivalent arrangements between national accounts Directorate and units providing basic statistical data (those related to Istat as well as to external bodies) could be integrated by the definition of standardized reports on the quality of data. A further development could consist in the definition of instruments allowing to keep the evidence of supervisory activity, such as standard reporting of data validation in order to trace adjustments to basic data occurring in the estimation process. In order to support the internal actions under way within the National Accounts Directorate, the constitution of a formal committee responsible for national accounts programme investing also other statistical areas appears as a possible solution.

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