

European Statistical System's experience in dealing with financial crisis and its implications for statistical cooperation

Everaers, Pieter / Barcellan, Roberto / Whitworth, James

European Commission - Eurostat

5, rue Alphonse Weicker

L-2721 Luxembourg, Luxembourg

E-mail: pieter.everaersa@ec.europa.eu, roberto.barcellan@ec.europa.eu, james.whitworth@ec.europa.eu

Abstract: Official statistics are playing an increasing role in our societies and governments. One of the major achievements of official statistics at the global level has been the development of international methods and standards, which has ultimately enabled an international data collection and sharing platform through the application of such methods and standards at the national level and the subsequent production of comparable data at the regional and international levels. In the paper the authors will analyse the implications of the financial crisis in the statistical work within the European Statistical System (ESS) as well as in its statistical cooperation relations outside the EU.

Key words and phrases: financial and economic crisis; official statistics; statistical cooperation; European Statistical System.

1. Introduction

The financial, economic, social and political scenarios have profoundly changed due to the recent events related to the crisis (financial, economic, social and public finance) and have generated an in depth reflection on official statistics and their role in an evolving society.

At the same time, official statisticians nowadays are very aware that users need statistical information not only for evidence-based policy-making and monitoring of policy implementation but also for decisions at business level, for research purposes as well as for communication purposes. In this context, providers of statistics are no longer merely national and international statistical agencies. Therefore, official statistics are called to assume a new role: to provide an infrastructure for statistical information with the aim to fulfil the needs of multiple users.

The European Commission Communication on the production method for EU statistics – a vision for the next decade (the "Vision", COM(2009) 404) has opened a new season for official statistics in the European Statistical System (ESS). The joint ESS strategy for the implementation of the Commission communication on the production method for EU statistics (ESSC 2010/05/6/EN) has identified the principles for the implementation of the Vision in the ESS focussing on the targets and the means required to achieve them in the coming years.

The new scenario and the actions undertaken at ESS level and, broadly speaking, at international level, constitute the basic elements on which statisticians are re-engineering the production processes of official statistics creating a new collaborative approach to the challenges of the coming years. This paper describes the foundations of this approach, the tools for its implementation and the consequences for the ESS and beyond.

2. The European Statistical System's reaction to the financial crisis

The different dimensions of the crisis (financial, economic, social and related to public finance)

required from official statisticians, and in particular from Eurostat and the ESS, different reactions to address effectively the challenges associated with the statistical consequences of the crisis.

First, the ESS had to deliver an **urgent and coherent reaction** addressing the gaps highlighted by the sequence of events related to the crisis: statistical consequences on key selected statistical domains with special relevance at European level (e.g. how to treat in public finance from a statistical point of view the public rescue of banks); prompt availability of key short-term economic indicators for monitoring the impact of the crisis and the impact of the measures to contrast it; international coordination; communication at different levels (to National Statistical Offices, to stakeholders and to users). The first reaction of the ESS and Eurostat to the crisis had, therefore, to be multi-fold and to deal with all these “urgent” different aspects.

The overall framework for action has been fixed around three axes:

- a. set up an ESS action plan to ensure the appropriate and proper consideration of the statistical consequences of the financial crisis on key statistics used in the European Union for administrative purposes and for the assessment of public finance. The activation of the ESS Action Plan has proved to be successful in streamlining the reaction of the ESS to the financial crisis, in creating awareness of the statistical consequences, in strengthening coordination and communication and, finally, to support the ESS actions to handle the response to the crisis.
- b. monitor the evolution of the situation through appropriate (existing) indicators and to monitor the impact of the measures undertaken to contrast the effects of the crisis itself. To meet these requirements, the ESS offered, through its statistics, in particular the Principal European Economic Indicators, a continuously updated overview of the effects of the crisis in European Member States and at European level, notably from the macroeconomic point of view. Other examples of new indicators needed to monitor the situation are shown in the boxes, below.
- c. enhance and coordinate communication: the crisis required an enhancement of communication between statistical authorities, policy makers and European institutions. At the same time, statistics were under scrutiny of users. Communication has been paramount in the ESS reaction to the financial crisis. Initially, efforts were concentrated on the implementation of the necessary actions to inform European Member States and international organisations about the ESS Action Plan in view of its full endorsement and implementation. The associated communication strategy focussed on different categories of users, information targets and dissemination tools. In addition, Eurostat actively participated and promoted international activities in relation to the statistical consequences of the financial crisis in close co-operation with other international institutions.

Second, the ESS had to **re-define its approach to production processes** to take into account the lessons learnt from the crisis and to successfully face the consequences generated by the crisis itself. Such consequences covered several aspects: the statistical gaps highlighted by the crisis; the new emerging users’ needs; the methodological implications; the impact on human and financial resources for the production of statistics; the need to enhance the international harmonisation and comparability of statistics; the need to provide sound statistical foundations to newly established economic and financial surveillance mechanisms. In this context, Eurostat issued the Communication on the production method for EU statistics, identifying the driving forces and designing the framework for the future production system of EU statistics (for the key principles of such an approach see Section 4). The Communication traces the guidelines for the development of production processes of EU statistics and puts together, in a systematic and streamlined way, ideas and actions currently undertaken in several EU countries but not yet fully in a corporate spirit. The Vision also intends to contribute to move the ESS from a provider of statistical information to a provider of statistical information/services/quality (shifting paradigm).

Third, the ESS has to identify the **implementation strategy** to set up the re-engineered production

system for EU statistics on the basis of the principles identified. The solution passes through concrete actions, targeted to broad statistical areas, supported by cross-statistical domains strategies, covering common issues, within a harmonised approach that will benefit from the most recent tools for the production of official statistics. Key words in this context will be prioritisation, multipurpose statistics, standardisation, re-engineering. In addition, cooperation at international level and newly established collaborative networks are at the core of the governance of the system (see Section 5).

Crisis-led Indicator Sets 1: Macroeconomic Scoreboard

One lesson of the crisis was that the monitoring of macroeconomic indicators was necessary (a particular example occurred in Greece). To this end, in September 2010 the European Council adopted a package of measures tightening up the macroeconomic surveillance powers.

Up to that moment, work had focussed on the qualification criteria for entry into the euro single currency, i.e. inflation, debt and deficit. The new package defined new measures:

- an alert mechanism through a scoreboard;
- preventative surveillance based on discussions and in-depth reviews;
- a procedure to detect excessive imbalances amongst the various sectors in the economy;
- an enforcement mechanism for Euro area members.

This gave Eurostat the possibility to go into countries and ask a number of questions: Are public finance data flows appropriate to ESA (SNA)? Is the data exhaustive? Is the quarterly data timely and consistent? How do member states control this data? How reliable are the data flows between public entities and the NSO? Are the registries of entities controlled by general government complete? Is the European Statistics Code of Practice being implemented properly?

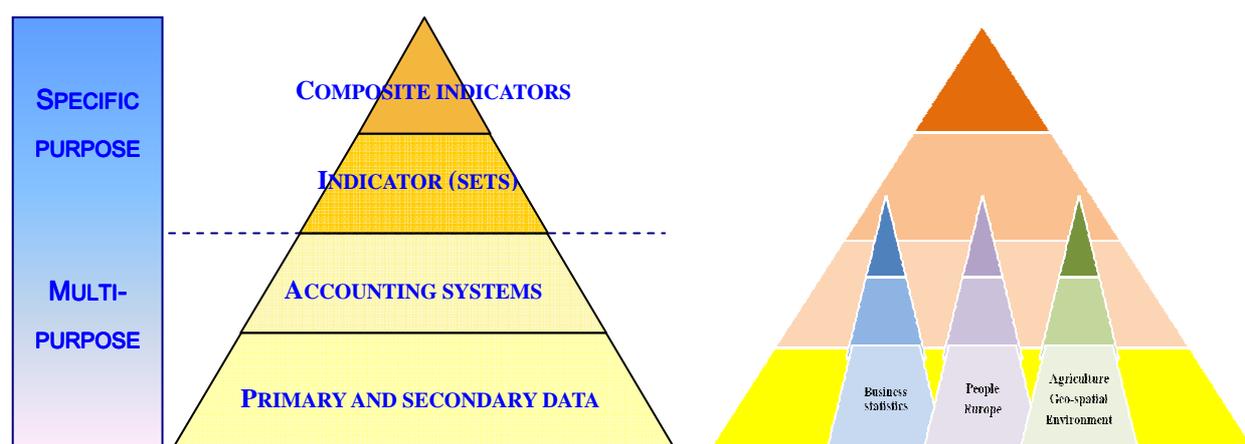
3. Key principles

The changes in the statistical scenarios of the coming years require an in-depth analysis of the role and aim of official statistics. There is a need to set the main strategic orientations for the future development of statistics in the European Statistical System, in a coordinated and harmonised way by cluster (main broad areas) of statistics.

The ESS statistical production can be assimilated to a pyramid of statistical information: the basis of the pyramid corresponds to primary and secondary data (first level) that are used to derive accounting systems (e.g. national accounts – second level) from which key indicators are extracted (third level). The top of the pyramid (level 4) is made by composite indicators derived through combinations of indicators.

The pyramid of statistical information concerns a specific statistical area (cluster of statistics); the combination of the different pyramids produces the entire system of statistical information that corresponds to the outcome of the ESS. The identified clusters of statistics are **three (pillars)**: “Business and Trade statistics”, “Social statistics” and “Agricultural/geo-spatial/environmental statistics”. The accounting systems reflect macroeconomic, social and environmental accounts (national accounts).

Primary and secondary statistics have to become “multipurpose” and serve multiple needs in order to offer, in a flexible way, the basic statistical information to be used to derive indicators for different purposes, according to evolving needs.

Figure 1: Pyramid of Statistical Information and the three pillars**Legend**

Primary data:	Data collected by statistical authorities, via traditional statistical activities (sample surveys, censuses, etc.) for statistical purposes
Secondary data:	Data collected for administrative purposes but used by statistical authorities for statistical purposes (usually referred to as data from administrative sources)
Accounting systems:	Coherent, consistent and integrated set of accounts, balance sheets and tables based on a set of internationally agreed concepts, definitions, classifications and accounting rules. They provide a comprehensive accounting framework which ensures a high profile of consistency and comparability and within which primary and secondary statistical data can be compiled and presented in a format that is designed for the purposes of analysis, decision-taking and policy-making
Indicators:	An indicator is a summary measure related to a key issue or phenomenon and derived from a series of observed facts. Indicators can be used to reveal relative positions and/or show positive or negative change.
Composite indicators:	Combinations of indicators.
Three pillars:	Business Statistics (business and trade); People Europe (social statistics); Agriculture, Geo-spatial and Environmental statistics

At the basis of the approach sponsored by the vision of a modernised statistical production system is a holistic approach, rather than a fragmented one, relying on the integration of data sets and by combining data from different sources (comprehensive production systems - the so-called data warehouse approach - for clusters of statistics).

These systems will be based on harmonised methodology and on a common (technical) infrastructure and will apply, as far as possible, standardised IT tools, making use of all available data sources which are appropriate in quality. This approach has the direct implication that European statistics would no longer be produced domain per domain but together in an integrated fashion (horizontal integration). In addition, synergies will be developed within the ESS and joint structures, tools and processes could be established or further developed through collaborative networks, involving both the national statistical authorities and Eurostat (vertical integration).

Several elements of the proposed integrated model imply a change in the professional paradigm of statistical offices from "data-collectors" to "re-users of data".

4. Implementation strategy

The implementation of the European systems method to statistics relies on three components:

- the first component remains Community legislation, which will continue to be mainly output-oriented and to set minimum standards for the production of statistics in a particular area;

- b. the second component concerns complementing product harmonisation by process harmonisation through the promotion of methodologies based on common tools;
- c. the third component is the promotion of common values and the sharing of knowledge throughout the ESS (use of the intelligence and know-how available in the system – i.e. human capital of the ESS).

This strategic approach is complemented by an improved communication with users and stakeholders.

In practice, the implementation requires dedicated actions for the three clusters of statistics, for the accounting systems, for the indicators and for the coordination of the entire system. In addition, the human and financial resources constraints (subject to a general reduction for the ESS) have to be taken into consideration.

Crisis-led Indicator Sets 2: EU2020

The Stability and Growth Pact looks after the macro-economic aspect of European policy. It is complemented by the **Europe 2020 Strategy** (EU2020), adopted in 2010, a policy framework for economic, social and environmental development in Europe in the next decade. It requires growth to be "**smart**" (based on knowledge and information), "**sustainable**" (more resource efficient, greener) and "**inclusive**" (making use of employment skills and aimed at reducing poverty).

There are headline targets in 5 areas:

- Raise the employment rate for women and men aged 20 to 64;
- Raise investment in R&D;
- Reduce greenhouse gas emissions, increase renewables, increase energy efficiency;
- Reduce school dropout rates, increase share of those having tertiary education;
- Lift at least 20 million people out of the risk of poverty and exclusion.

The targets and indicators are defined at EU level. Within each headline target, each member state defines national targets and indicators.

4.1. Definition and exploitation of common elements

Each statistical cluster is an integral element of the statistical system, highly interconnected with the other elements, notably those of a horizontal nature that form the infrastructure of the system:

- a. Common **reference classifications**: the ESS has already successfully set up a comprehensive and consistent system of classifications such as the NACE, the CPA, NUTS, etc.
- b. Common **metadata** infrastructure and handling. European as well as international standardisation has been achieved in the area of metadata and further harmonisation progress, targeted to statistics in general, is foreseen.
- c. Common **data exchange protocols**: SDMX is becoming the international standard for the exchange of statistical data and metadata. Its general nature will not require dedicated treatment of specific statistical domains. SDMX will therefore be the data exchange protocol for the entire ESS. At the same time, web-services oriented technologies will represent the reference for data dissemination and exchange. These two technologies, combined with the definition of international Data Structure Definitions (DSDs) for homogeneous statistical domains (e.g. business statistics), will form the core of statistical data exchanges.
- d. **Quality standards**: the convergence towards the definition of common quality standards may mean that

quality arrangements for dedicated specific statistical domains become obsolete. At European level, the implementation of the Code of Practice and the Communication COM(2011) 211 on robust quality management for European Statistics will provide the appropriate setting.

- e. **Basic reference statistical legislation:** at European level, the statistical law, the five year statistical programme, the corresponding annual work programmes set the overarching legal framework for the ESS work.
- f. **Other key elements** such as the shift towards the more intensive use of administrative data, the provision of common tools (e.g. EuroGroups register), the promotion of microdata linking, intensified contacts with the institutions in charge of defining international accounting standards and the establishment of a common identifier for all European enterprises will have prime importance for the development of statistics. On these projects, Eurostat is working in close co-operation with the key stakeholders, such as Commission services and international organisations.

4.2. Core principles by cluster of statistics

Each statistical cluster will define common dedicated principles to refer to. For example, in business and trade statistics, this corresponds to (a) putting the enterprise at the core of the system; (b) selecting the relevant classification – NACE and CPA – as reference classifications and drivers for the integration; (c) referring to the same statistical unit for the reporting of data; (d) setting up consistent data requirements. These core principles will be supported by the general idea of streamlining the production processes and producing multipurpose statistics.

4.3. Methodological, infrastructural and legal frameworks

At the ESS level, a successful implementation requires an appropriate definition of the methodological, infrastructural and legal frameworks.

A suitable **methodological framework**, built on existing elements but according to an integrated approach, is essential to provide the necessary methodological instruments for the development of cluster statistics in the coming years. The methodological framework has to cover common definitions/principles, reference manuals, sources and methods, best practices/guidance. In addition, it will be developed through a co-operative approach between stakeholders, under the leadership of Eurostat, involving international organisations, experts in the different fields and by consulting users. The methodological framework has to be flexible enough to adjust to a changing environment.

Whilst the definition of all the elements of the **infrastructural framework** still requires further consideration, some key factors have already been identified: identify and promote the core elements of the system by cluster of statistics (e.g. business register and administrative sources for business statistics; system of surveys for social statistics); use common classifications; apply common rules for data and metadata handling; quality; data warehouses; harmonised tools.

The **legal framework** underpinning the various statistical areas has to be re-engineered to reflect the general orientation of the ESS (comprehensive legislative policy); the specific orientations of clusters of statistics; the increased need for flexibility of the production process to match evolving users' requirements; the need to fix overarching principles and to avoid a too in-depth/rigid legislation; the need to take full advantage of cross-domain legislation (e.g., classifications, data exchange protocols, quality requirements, objectives fixed in the multi annual statistical programme), avoiding overlapping of specific legal acts. The new legal framework will be based on overarching legislation, common legislation, "politically driven" legislation and "technically driven" legislation.

4.4. Special areas: statistics for administrative purposes

The crisis emphasised the role of statistical indicators as surveillance tools in dedicated areas

generating an enlarged family of so called “statistics for administrative purposes”. Because of their role, these statistics deserve a special treatment and a dedicated framework that ensures their adequate quality and monitoring. Public finance, Gross National Income, Regional GDP, the Harmonised Index of Consumer Prices, the Europe 2020 indicators and macroeconomic surveillance indicators all represent such statistics for administrative purposes. Their choice comes from the need to satisfy economic and monetary policy purposes; they have been identified by policy makers and anchored to the official statistics via a constructive discussion with official statisticians. Nevertheless, statistics for administrative purposes need a dedicated framework centred on the concept of quality, harmonisation, comparability and compliance, going even beyond the statistics and touching the basic information used to compile them. Communication COM(2011) 211 'Towards robust quality management for European Statistics' goes exactly in this direction and designs a framework that will help the ESS to move forward on quality and monitoring, shifting from correction to prevention.

5. Collaborative networks, international coordination and statistical cooperation

The crisis has also made the ESS re-think the cooperative approach to its general development and to coordinate with the initiatives put in place at international level to address the statistical gaps highlighted by the crisis.

At ESS level, the constraints imposed by the crisis (fewer human and financial resources available for statistical offices) have naturally led to the setting up of **collaborative networks** to contribute to the definition and the implementation of a re-engineered approach to production systems. Examples are: the ESSnets, statistical joint ventures involving Eurostat and interested Member States to analyse specific issues and propose concrete solutions (among which, for example, data warehouses, standardisation, common reference environment and common reference architecture); the sponsorship groups (groups of directors sponsoring issues among which communication, standardisation, well being); the governance bodies (ESGAB – European Statistical Governance Advisory Board); stakeholders bodies (ESAC – European Statistical Advisory Committee).

At **international level**, in response to the global economic and financial crisis, countries and international organizations have launched several coordinated statistical initiatives. The focus of these initiatives was to identify and remedy data gaps, to monitor rapid changes in economic activity, to allow for timely and measured policy responses, as well as to improve the harmonisation, comparability, dissemination and communication of available relevant information. These initiatives include the series of international seminars on Early Warning and Business Cycle Indicators, organised by UNSD/DESA and Eurostat in collaboration with Statistics Canada, CBS (The Netherlands) and Rosstat (Russian Federation); and the activities of the Inter Agency Group on Economic and Financial Statistics (IAG) comprising the International Monetary Fund (chair), the Bank for International Settlements, the European Central Bank, Eurostat, the Organisation for Economic Cooperation and Development, the World Bank and the United Nations.

Both initiatives identified the need for a set of comparable key indicators and aimed to set it up (Principal Global Indicators sponsored by the IAG, and the common data template sponsored by the UNSD/DESA).

Concerning **statistical cooperation**, with resources being diverted towards the new priorities, Eurostat re-focussed its approach. New ways of working with development partners needed to be found. Instead of individual specific projects, EU aid is becoming more focussed on broader "**budget support**" projects. This has a twofold effect on statistics. First, statistics itself is seen as a governance issue, so statistical capacity building can be included in general programmes for building democracy and accountability. Second, the very fact that these budget support programmes exist, means that there must be a mechanism for assessing their effectiveness. Hence, there is an enhanced role for official statisticians to provide the indicators needed to assess the success of these broader projects. In passing it should be noted that a new paradigm emerges:

whereas up to now international work has aimed at harmonising statistical data over countries (the Millennium Development Indicators are an example), the issue here is to harmonise the "before" and "after" situation within each country; any issues of comparability with neighbouring countries assume less importance.

The rate of development of many countries in the world has also necessitated a change of approach. Countries such as China, India, Mexico and Brazil, which have been the beneficiaries of aid programmes in the past, are now developed countries in their own right. A more co-operative framework is now appropriate. For example, Eurostat's work in Latin America is now becoming more focussed on Memorandums of Understanding than development projects. This allows a more participatory approach with Brazil, Chile, Colombia and Mexico, for example, working closely with Eurostat through the UN Economic Commission for Latin America and the Caribbean (UN-ECLAC) in the organisation of workshops and seminars under the terms of the European Commission's broader Memorandum of Understanding with UN-ECLAC.

6. How the strategy feeds into statistical cooperation policy

So, what are the effects of the development in the European Statistical System on Eurostat's statistical development policy? Some concrete examples are already evident.

In the first instance, the work on quality and the European Statistics Code of Practice (CoP) have aroused interest in various parts of the world. A satellite event on quality for international organisations has been organised back to back with the biennial ESS Quality Conference. Elements of the CoP were used as an input into the African Statistics Charter. More concretely, a CoP for the UN-ECLAC region is being developed along the lines of the European one.

The ECLAC countries are working together in a collaborative network in this CoP work as well as in different subject matter topics, such as business registers and standards for SDMX.

The quality issue is also visible in the programme of peer reviews and global assessments that is being organised jointly by Eurostat, UN-ECE and EFTA in the Eastern European and Central Asia region (including Mongolia).

A central pillar of Eurostat's statistical co-operation work is the outreach of the Vision for the production method for EU statistics. Whilst at first glance, the scope for incorporating such a strategy in developing statistical systems might appear to be limited, probably the reverse is true. Developed systems have come about in a piecemeal approach: the need for a statistic is assessed and the traditional response has been to organise a survey or other tool explicitly for that purpose. For a statistical system being set up from a more basic starting point, the bigger picture can be considered at the stage of drawing up the National Strategy for the Development of Statistics (NSDS), with multiple statistical needs being treated together. PARIS21's initiative, the Accelerated Data Programme (ADP), is also consistent with this approach, aiming at increasing the use and value of existing survey data.

Another application that might be considered would be to adopt the EU2020 approach in development indicators. One of the major frustrations of National Statistical Institutes is that international agencies sometimes do not use country data in compiling important measures of development, such as the Millennium Development Goals or Human Development Report, preferring to adjust or model data. This may be for perfectly explicable reasons, for harmonisation across countries, for example. The EU 2020 initiative defines indicators for the broad headline targets, but there is a larger set of nationally defined indicators that need harmonisation over time, not necessarily with the other member states.

It would be wrong to say that the financial crisis alone has greatly affected the EU's approach to statistical co-operation. Many of the triggers were already there: the Paris Declaration of Aid Effectiveness and Accra Agenda for Action (with their emphasis on ownership, partnership and results), a move towards

budget support as an instrument of funding, more rational use of data sources in statistical production, an increasing interest in measures of progress that go beyond the monetary value and the "coming of age" of national statistical systems that were once beneficiaries, but are now in a position to help others. However the crisis did focus minds towards a more critical view of the way money is spent and therefore a reassessment of priorities. This has changed the approach from one of assistance and support towards one of collaboration and partnership.