

TOWARDS A MORE INTEGRATED INTERNATIONAL STATISTICAL SYSTEM: THE ROLE OF TRAINING

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Over the last few years, several proposals have discussed how to strengthen the international statistical system. In particular, the Committee for Co-ordination of Statistical Activities has identified a medium-term strategy to improve the quality of statistics produced by international organisations, as well as the co-operation among them. Building on the experience of some organisations, including the OECD, some principles and recommended practices have been identified. One area that requires a special investment is training. The paper describes some experiences made at the OECD and highlights proposals for future investments in this field.

INTRODUCTION

The Organisation for Economic Co-operation and Development (OECD) is a well-known worldwide institution actively involved in the formulation of policy recommendations in key areas of interest to its Member governments, holding co-operation agreements with almost all other international organisations. In undertaking this work the OECD Secretariat requires a wide range of comparable statistics for both the analytical work underpinning the development of policy recommendations and for its ongoing work of monitoring developments in Member countries and in key non-Member economies. The OECD also disseminates a substantial amount of statistics to external users.

To face new challenges, such as the evolution of the international statistical system and especially the increase and diversification of users' needs, in a context of budget reductions in real terms, the OECD Statistics Strategy was launched in 2001, with the ultimate goal of improving the overall quality of OECD statistics. Since then, several initiatives have been undertaken to address technical, managerial and organisational issues, with a special attention to the improvement of human capital, as well as to initiatives to improve the OECD statisticians' satisfaction at the workplace. Collectively, these achievements have resulted in the improvement of quality of OECD statistics, as well as in the efficiency of statistical activities. Finally, the Strategy has also brought a greater internal recognition (by OECD governing bodies and the Delegations) of the central importance of high quality statistics to the work of the OECD, and as an output in their own right for use by a wide range of users.

Of course, the OECD is part of the international statistical system. Therefore, the Organisation has been an active player in the Committee of United Nations for Co-ordination of Statistical Activities (CCSA), contributing to the development of a medium-term strategy to improve the quality of statistics produced by international organisations (IOs), as well as the co-operation among them. Building on the experience of some organisations, including the OECD, some basic principles and recommended practices have been identified. One area that requires a special investment is training. The paper describes some experiences made at the OECD since 2001 in this area, as well as in the context of CCSA, and highlights proposals for future investments in this field to strengthen the international statistical system.

THE OECD STATISTICS STRATEGY AND THE IMPORTANCE OF HUMAN CAPITAL

OECD statistical activities are carried out in several Directorates by statisticians with different backgrounds and work experience. Approximately 100 statistical activities are carried out every year, the vast majority of which are devoted to producing and releasing data. On the other hand, statistics are used daily by OECD analysts, whose primary need is to access data and metadata in an efficient way. Although the decentralised model has many advantages, there are some disadvantages and resulting risks. The main problem areas are related to the efficiency of individual statistical processes and to the overall quality of OECD statistics from the user's perspective. In addition, a decentralized system can result in duplications in data collection, increasing the burden on national data providers.

The OECD Statistics Strategy was launched in February 2001. This paper cannot provide a full picture of what has been done on individual domains, but can only highlight some of the “corporate” initiatives undertaken in the context of the Strategy (more information can be obtained from annual statistical programmes of work, available at www.oecd.org/statistics). In particular, the Strategy was focused on the following domains: institutional set-up, ICT investments, quality management, including improvement of human capital.

Institutional Set-up

To improve the internal co-operation and co-ordination within the Secretariat, two bodies were created in the 1990’s, where all relevant Directorates are represented: the Statistical Policy Group (SPG) and the Analytical and Statistical Task Force (ASTF). The former is in charge of discussing the more strategic issues and is the main tool available for the Chief Statistician to play his co-ordinating role. The latter mainly deals with technical issues, such as ICT developments, relevant for OECD statistical work. Since 2001, the functioning of both bodies was strengthened and improved, making them effective tools for exchanging opinions and establishing strategies and guidelines to be followed by the whole Secretariat. Given the high number of new initiatives undertaken, both the SPG and ASTF were fundamental *fora* to promote horizontal dialogue, build confidence, identify priorities, agree on solutions, etc.

To promote the dialogue with National Statistical Offices (NSOs), the most important (even though not unique) partners for the OECD statistical work, the High Level Group on Statistics was created in 2002. Attended by Heads of NSOs of OECD Member countries and representatives of international organisations, it represented a fundamental tool to reinforce the statistical network and demonstrate the need for a regular dialogue between the Secretariat and NSOs at policy level. In 2004 the OECD Council decided to transform the High Level Group into an official *Committee on Statistics*, which has a strong policy mandate covering all activities carried out by the Statistics Directorate and other Directorates.

ICT Developments

A big investment was made over the past years in the development of the OECD Statistical Information System (SIS), which now incorporates tools for data and metadata collection, manipulation, storage, dissemination, discovery and retrieval, preserving the independence of individual data producers, while making their data and metadata part of a coherent and seamless corporate system. The architecture of the SIS consists of three layers: a *production layer* for the collection, validation, processing and management of statistical data and metadata; a *storage layer*, where validated statistics and related metadata are stored; a *dissemination layer*, for producing statistical publications and online/offline interactive statistical products (Figure 1).

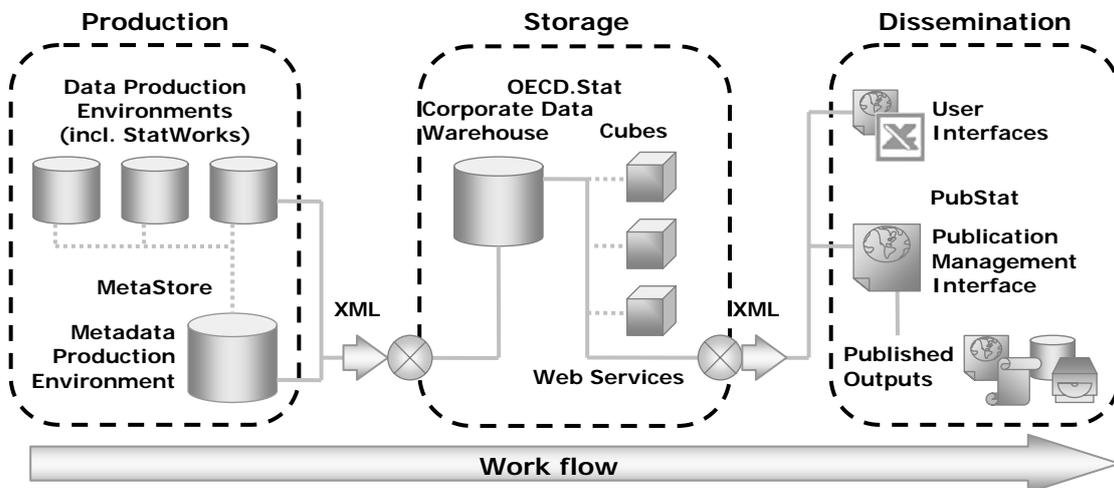


Figure 1: Structure of the OECD Statistical Information System

The independent but inter-operating components of the new SIS are the following:

- *OECD.Stat is the central repository (“warehouse”)* where validated statistics and related metadata are stored. It has been designed to preserve the decentralised nature of OECD Directorates' statistical activities, while making their data and metadata part of a coherent corporate system. OECD.Stat will progressively become the sole source of coherent statistical data and related metadata for the Organisation's statistical publication and electronic dissemination processes.
- *StatWorks provides a common hosting environment for production databases.* The objectives are to strengthen standardisation of design and to minimise the number of tools used in statistical activities across the Organisation, and as a result reduce support requirements. StatWorks includes a toolkit with facilities for: database administration; data collection and validation; data manipulation; export of validated datasets to OECD.Stat.
- *MetaStore is the corporate metadata facility.* It provides a set of tools for managing metadata and supports adherence to common metadata management principles across the OECD with the aim of avoiding duplication of effort in metadata preparation, gaps in metadata availability, and inconsistent metadata across databases.
- *Finally, PubStat, the corporate tool for producing OECD statistical publications has been developed.* It has been built on with the objectives to: increase the efficiency of statistical dissemination processes, reduce time-to-publish and give the Organisation's statistical publications and electronic products a common “look and feel.”

A new *OECD Intranet site* for statisticians and analysts was developed in 2002. It was designed as a gateway to several internal and external sources of: statistical guidelines; statistical methodology documents; data and metadata produced within the Secretariat, in other international organisations, and in member countries; and IT tools for conducting statistical operations (seasonal adjustment, etc.).

In conclusion, the development of new ICT tools has been very important in improving the quality and the efficiency of OECD statistics, as well as in developing a “corporate” approach to statistical activities.

Quality Management

Almost all activities undertaken over the last few years aimed to improve one or more quality dimensions, such as timeliness, accuracy, coherence, interpretability, etc. Although all OECD statisticians have always been committed to produce the best possible quality statistics, an *OECD Quality Framework* was developed in 2002. The Framework, which focuses on improving the quality of data collected, compiled and disseminated by the OECD through an improvement of the Organisation's processes and management, is based on “core values for OECD statistics” and has four elements: a definition of quality and its dimensions; a procedure for assuring the quality of proposed new statistical activities; a procedure for evaluating the quality of existing statistical activities on a regular basis; and internal quality guidelines covering all phases of the statistical production process. Since its development, several activities have been reviewed and recommended actions to address quality concerns implemented.

Furthermore, the “human factor” is absolutely crucial when implementing broad organisational and technical reforms, and the launch of a “corporate strategy” for OECD statistics required a great deal of effort to increase the participation in the project of all statisticians working in different Directorates. Therefore, a crucial point of the Strategy has been the development of a common identity for OECD statisticians and the improvement of their skills through a specific training programme.

Since April 2001 an *OECD Statisticians Day* has been organised twice a year. The meeting represents a fundamental tool to sustain the process of staff involvement in defining future strategies, exchanging good practices and identifying new needs. The development of a training programme for OECD statisticians has also been very important to improve statistical skills of statisticians, enhance their *esprit du corps* and sustain the transition to new technologies and the implementation of the Quality Guidelines. The *Statistical Training Advisory Group*

(STAG), created in 2001, regularly evaluates statisticians' needs and supervises the development of the training programme.

Finally, the first *OECD Statisticians Satisfaction Survey* was conducted in December 2003 to measure, on a subjective basis, the extent to which OECD statisticians and analysts dealing with statistical products are satisfied with their working conditions and to identify areas that require further attention and investment. The results of the survey were based on the responses of 154 statisticians across the Organisation. In response to a question asking respondents to evaluate overall job satisfaction, a large majority (76.3%) indicated that they were "very satisfied" or "satisfied," while only 8.8% answered that they were "dissatisfied" or "very dissatisfied," and 14.9% were "neither satisfied nor dissatisfied." After the survey, initiatives were undertaken to address concerns expressed by statisticians on technical, organizational, managerial and training issues. A second satisfaction survey is foreseen at the end of 2006.

In conclusion, the OECD has developed and implemented several tools usually recommended by "Total Quality Management" approaches. These tools have been designed taking into account the OECD institutional and organisational setup and sustained by an investment in human capital. The on-going update of this approach is required to avoid its obsolescence or its transformation into a bureaucratic, and thus meaningless, exercise.

STATISTICAL TRAINING AT THE OECD

Training is organised by the Learning Centre of OECD's Human Resources Management. It is developed on the basis of a wide reflection on competencies by job families. Yearly training plans are established as part of individual performance evaluation schemes. They are then brought together into an OECD wide training plan that is monitored by the Learning Centre. Training needs are also surveyed every two years and survey results are fed into the OECD training plan.

Statistical training, as one pillar of the Statistics Strategy, has received a special focus in OECD's training policy. The Statistical Training Advisory Group (STAG) was established and has successfully supported the strategy. The STAG advises the Learning Centre on training relating to the professional competencies for statisticians. It thinks corporately and in terms of the skills needed by staff working specifically in an international environment. It identifies statistical training needs, prioritises them and identifies suitable sources/means for delivering the training. Finally it makes recommendations to top management in statistical activities.

Four main means of provision of training have been developed and are commonly used:

1. A core set of regular courses, mainly provided by OECD staff, to be repeated at least once a year. Typical courses cover statistical and economic issues, software and databases, etc.
2. One-off seminars and presentations, provided by staff and visiting experts, including seminars at external organisations, series of lunchtime seminars, etc. These seminars usually visit a specific area of expertise in depth.
3. Training at external organisations, courses, secondments, etc. These forms usually cover topics for which many external courses exist, offered by both academic and official institutions such as statistical theory topics. Similarly, courses in official statistics (national accounts, labour market statistics, etc.) are offered by many NSOs and international organisations.
4. An electronic statistical "knowledge-base" that provides course materials, statistical manuals, links to sites with statistical material, etc., to OECD staff.

Training is open to all staff, not only statisticians. When compared to the whole range of OECD job families, statisticians have the largest share of participation in training. Perception of training is overall positive, as shown by the results of the Statisticians Satisfaction Survey carried out in December 2003. More than 90% of respondents are informed of training courses offered to statisticians and over 60% have been trained in the past two years. About 50% find that they have increased efficiency in their daily work through statistical training. However statisticians still consider workload as an obstacle to training, and nearly 30% find that the training offer is not useful. These areas of weakness will be targeted, through a better identification of training needs and workload peaks.

Statisticians see mobility as one element of their professional development and a vector for career development, as it allows increase in knowledge and know-how. Mobility is therefore

one area of special interest. Internal mobility has been enhanced by improving the flow of information on offer and demand for mobility and by including staff development in the competencies of managers. Bridges and partnerships are also established with NSOs and IOs to develop inter-organisation mobility. Secondments of OECD staff to NSOs have taken place on several occasions. This initiative shows, if necessary, that IOs share the same objective of improving their services by building on their human capital.

TOWARDS A CLOSER CO-OPERATION BETWEEN INTERNATIONAL ORGANISATIONS: THE ROLE OF TRAINING

The CCSA Initiative Towards a Stronger International Statistical System

International organisations are trying to build stronger partnership among themselves. As decided at the 2005 meeting of the CCSA, such a strategy should have as its key elements: a few core agreed principles; a culture of quality; and the use of common technical infrastructures to minimise the reporting burden of Member countries; joint investment to improve human capital.

The first pillar towards a strengthened partnership was the agreement on a few *core principles*, similar to those contained in the UN Fundamental Principles of Official Statistics (FPOS). These principles (see www.un.org) provide the heads of IOs and statistical senior managers with guidance in organising their statistical services and activities. Good practices are also recommended. The UN database on practices followed in implementing the FPOS will now be expanded to include experiences in IOs.

The second pillar is the development of *quality assurance frameworks for activities* carried out by IOs. Once developed, IOs would be encouraged to report their current practices to improve quality. Regular meetings to compare good practices developed in IOs and the establishment of a programme for staff exchange and common training initiatives will help IOs develop a common culture of quality management and foster the cross-fertilisation of ideas across their statistical divisions.

The IMF experience with the Special Data Dissemination Standards (SDDS) and the General Data Dissemination System (GDDS) shows the key role that a public evaluation of data quality can have in pushing data providers to improve their production processes. A tool for enhancing the approach to quality would be the development of an *International Data Quality Assessment Framework (IDQAF)* and of *International Data Dissemination Standards (IDDS)*, which should be subscribed to on a voluntary basis by IOs carrying out statistical activities. This initiative will speed up the convergence of IOs towards higher quality standards and improve their accountability vis-à-vis final users. A CCSA sub-group has been created to design a quality framework for IOs and propose a quality reporting system.

Finally, the development of reinforced co-operation between IOs requires a co-operative effort to build *common infrastructures for data and metadata exchange*. The Statistical Data and Metadata Exchange initiative (see www.sdmx.org) can play a fundamental role in this respect. New ICT approaches make it possible to integrate decentralised and heterogeneous systems. In addition, a joint effort by IOs on developing common software solutions for data collection, management and dissemination could reduce the overall costs of carrying out statistical activities and influence the main software vendors' policies, with a positive spill-over onto national agencies dealing with statistical activities.

Initiatives on Training

The CCSA principles have stimulated inter-agency cooperation in the field of training with a view to allow the development of programmes to improve the professional skills of statisticians. An initial survey led by the IMF was sent to IOs during the summer of 2005. Survey results were synthesised in a report that was submitted to the September 2006 meeting of the CSSA. The report recognises that most of the international organizations which responded operate on small training budgets and have either no, or only small, access to external funding. English is, by far, the dominant training language, while computer training plays a part in overall statistical training. As a group, organisations rank courses/seminars/conferences as most important aspect of their training programs. In addition, other modes including outside training

(e.g., at universities), internal mobility of staff, and e-training are used as well. Training at many organizations covers both internal programs (own staff) and external programs (country officials).

The report also notes that although little monitoring of training programs is commonly done, training programs have grown significantly in size and coverage during the period 2000–05. The survey uncovered the so-far limited use of the Internet for dissemination and sharing of training material. Looking at demand for statistical training, it appears that change in mandate or work programme is the driving force. IOs commonly perceive a gap between training needs and their internal capacity to meet them. External training (technical assistance and capacity building) shows the same patterns and similar issues and shortcomings can be noted.

The survey process allowed a first contact in this area between IOs and a network of people responsible for statistical training in member organisations is being created. Building on the experience at the OECD and survey results, the network proposed to:

- build an electronic statistical knowledge base to facilitate the sharing of information and statistical training materials among the CCSA members. The development of a high-standard electronic platform for sharing training programs and materials will be explored, following the SDMX standards;
- create STAG-like groups in each organisation to promote internal statistical training. The groups in each organisation would also coordinate statistical training needs in each organisation and establish the training gaps that need to be filled;
- develop partnerships and agreements with universities and training institutions for training international statisticians. This would be of particular interest for e-learning;
- facilitate mobility across IOs to promote the development of human capital;
- share training material such as those describing standards and data production manuals. They can be shared among organisations and translated to expand good practices and facilitate broader regional and country training in statistics;
- explore better funding for and greater awareness for statistical training internally and across IOs;
- in March 2006, at the regular meeting of CCSA these initiatives will be discussed further, with the aim of establishing a concrete work programme able to improve the situation in the medium-term, but with some short-term deliverables.

CONCLUDING REMARKS

For many years international organisations have issued recommendations to national statistical agencies on how to conduct their activities. Finally, they have decided to apply to themselves at least some of these recommendations. Deontological and organisational principles, quality frameworks, ICT common infrastructures and joint initiatives to improve human capital represent fundamental pillars of the strategy to build a stronger international statistical system and improve the quality of statistics compiled and disseminated by international organisations.

In this framework, training is a fundamental tool to manage the transition to a new organisation of the international statistical system. The initiatives launched in the last two years represent an important step forward. The importance of a common effort in the field of training is now acquired among the community of heads of statistical divisions of IOs. The establishment of a network for training international statisticians represents a concrete tool to develop a better co-ordination among IOs and new ideas to address the issues identified by the IMF survey. Of course, co-operation opportunities between IOs and the international community of experts in teaching statistics need to be carefully exploited. The use of e-learning, for example, is very promising and IOs can learn a lot from what has been already developed in several universities. The OECD is committed to contribute to these developments.