

Workshop on Human Resources Management and Training

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Topic: International master in official statistics

The European Master in Official Statistics from a national point of view: the Italian contribution¹

Introduction

1. The idea of establishing a common framework for training official statisticians in the form of a European Master has been under discussion for more than two years, involving Eurostat, national statistical offices and Academia in different occasions. Recently, Istat engaged in an initiative to collect information about the interest of NSIs and academic institutions to set up a European master in official statistics (EMOS). The main findings of this first collection of comments/ideas – presented during the ESSC meeting, in February 2012 – is quite a general consensus on the project, seen as an effective tool to enhance official statistics at the national level and for EU.
2. After a laboured start, Eurostat involvement in EMOS has been made clear as it was selected as a Vision Infrastructure Project for the year 2012. A call for tender for “the supply of a feasibility study related to the setup of a European Master Programme in Official Statistics” was recently published, including a study on Master programmes in statistics in EU and EFTA, a comparative analysis, assessment of interest for EMOS, consequences of applying a labelling mechanism.
3. The interest to the European Statistical System (ESS) as a whole is multi-faceted, implying an enhancement of the academic offer of Master programmes in official statistics, a stronger cooperation between Universities and NSIs, the possibility to reinforce the network of European statisticians and to spread a shared vision of the ESS in its different aspects.
4. Almost in parallel with the recent re-launching of the EMOS project, Istat established a new Directorate, the Advanced School for Statistics and Socio-economic Analyses, with a twofold objective: reinforcing internal training for its staff, and contributing to the improvement of statistical capacities in public administration and in the private sector.
5. On the one hand, the role of internal training has to be reinforced to support major changes that have recently taken place in Istat organisation, which were accompanied by a series of innovations in statistical production and a rethinking of the management profile. In such a developing context, the new Advanced School has to fully share the institute’s strategic goals in order to facilitate processes of innovation, providing the methodological and managerial tools required to develop and manage them effectively.

¹ Paper prepared by Maria Pia Sorvillo (Istat-Italian National Statistical Office) and Monica Pratesi (University of Pisa).

6. On the other hand, it has been observed an increasing need for quantitative literacy coming from the public administration and, at large, from civil society: to be able to read statistics, to use them in line with defined targets, to monitor and assess policies and decisions, to use data to support the growth of people and institutions. In this context, the Advanced School for Statistics can offer quantitative tools to analyse and understand socio-economic phenomena to public administration officials, professionals and staff of the National Statistical System, as well as other public and private organisations. University students, researchers in various fields, middle management in enterprises and also private individuals interested in the subjects dealt with by the School, all fall within this category.
7. A special attention is paid to cooperation with universities, an obvious point of reference for any initiative related to advanced training, and to foster activities involving international partners and beneficiaries both in Europe and extra-European ones. Consistently, the EMOS project is of particular interest to the School.

NSIs' involvement and possible contribution

8. From a national point of view, the European Master in official statistics would offer several advantages. Initiatives reinforcing the academia-NSI cooperation are highly beneficial, as scholars and academic research can propose innovative methodologies and techniques that official statisticians can include in their procedures, enhancing the overall quality of data production and analysis. Already in the past, projects in cooperation between universities and NSIs did prove to be both fruitful and effective. EMOS could act as flywheel to encourage the setting up of program firstly designed for training national staff, with the perspective to develop in such a way to become a part of the EMOS program.
9. Most of European NSIs are under serious stress, due to the continuously growing demand for statistical information both from the national stakeholders and from the EU. Innovating is becoming a need in order to be able to answer to new and pressing requests, especially in a time of economic crisis. And innovation implies training programs to become an asset for the whole organization, and to be spread in other organizations as well.
10. Pressing requests for more accurate and reliable statistics at the European level ask for an effort for harmonization in the ESS. Staff's skills in this specific field have to be built, updated and enhanced; sharing methodologies and techniques, but also a process of cultural convergence, should be taken in due consideration. NSIs' efforts to be more effective in the ESS could be supported by shared training initiatives with a strong international dimension, as granted by a program such as EMOS.
11. If the program will be opened to young graduates, it could become an effective tool to prepare potential new staff for NSIs, already trained in those topics considered crucial for the development of official statistics. Its completion would be an asset for young people entering in the labour market, and a resource for NSIs when recruiting officials and researchers.

12. To make the program really fit for the purpose of reinforcing official statistics and beneficial for NSIs, a strong participation from their side in the definition of EMOS is crucial, especially in identifying contents and subject matters to be covered. NSIs can contribute in designing an effective program thanks to a first hand experience in producing, analysing and communicating official statistics, covering the various competencies that are required to run effectively a NSI. Already now, and more and more in the future, a strong competence on methodological issues is necessary but not sufficient.
13. In order to reach the critical mass to allow the program taking off, NSIs contribution is relevant, as they could provide a significant number of participants. In addition to that, NSIs (and Eurostat) experts could play an active role as teachers in selected parts of the EMOS program. Granting that relevant practical issues are dealt with in the light of their first-hand experience.

Operational issues

14. As for the overall organization, a possible structure for the EMOS program is a modular one, where courses organized by different bodies – e.g. universities or advanced schools - are offered to participants in a coherent way, letting them free to compose their own training based on competencies they already have and their specific needs. To enhance the international dimension of EMOS, it would be appropriate to let participants choose among modules even if offered by different countries, as that solution would give them the possibility to reinforce their professional network and to improve the cross- cultural exchange. From this perspective, the choice of a single location for EMOS (such as the Eurostat premises in Luxembourg) would not be as effective as modules delivered in Member States, at the premises of the universities or NSIs involved.
15. When reasoning on a European program as EMOS, the issue of labelling and accreditation is crucial. The framework of the Bologna process should ease it, at least when the training is provided by qualified bodies already active at the national level. Careful consideration of the possible combination of modules leading to the final certificate is needed, possibly foreseeing different levels, depending on the number of credits obtained, in order to avoid that flexibility turns into a lack of clear recognition of the relevance of the training activities completed.
16. Participants should be, first of all, researchers and staff working in NSIs. But a need of specific training could be found also among professionals working in statistical authorities other than the NSIs or in research centres involved in statistical production and analysis and, at large, among officials that operate in the National Statistical Systems. Young graduates, aiming at getting a specialization in the field of official statistics, could be a third category of users of the master. Such a wide potential audience claims for flexibility, i.e. a training path that every participant can tailor on his/her specific needs, and for different levels of elaboration. That is, it would be necessary to be able to offer advanced training and modules of a basic-intermediate level.

17. Although training needs in NSIs are mainly in the field of statistics, that will not cover the all range of subjects more urgently required. The focus of the training would be on new tools and estimation methods for the production and dissemination of official data, and topics such as models of data integration and linkage, small area methods and exploitation of survey data and administrative archives all are relevant. Statistical methods to produce statistically sound indicators and estimates at local level in the respect of data quality and confidentiality issues should also have a place in the tool-kit of NSIs staff , as data collection methods using new techniques based also on Web surveys, facing the challenges and problems emerging from the open data, data sharing and data warehouse issues. But that would not exhaust relevant competencies: managerial and organisational expertise are more and more necessary, together with tools to analyze the users' needs, communication skills and knowledge of the national and international context of statistical systems.

The Italian initiative

18. The new advanced School in statistics and socio-economic analysis is planning, in cooperation with SIS (Società Italiana di Statistica – Italian Statistical Society) and Academy, to set up an integrated course in official statistics. The project is based on the mission of the Advanced School, on the long lasting experience of SIS in organizing training with both practical and theoretical relevance, and the willingness of Academy to put itself to test in courses relevant to official statistics. This organization implies a close coherence between proposed topics and the needs of a NSI, a straightforward translation in materials for accreditation within the Bologna framework, a high level teaching both on the theoretical side and on the practical one.

19. The project is taking advantage of a number of courses already organized by SIS, both high level courses for students and statisticians (interested in deepening their knowledge on innovative topics or applications of statistical methodologies) and training for staff of public administration and enterprises (aiming at using advanced statistical tools in order to improve efficiency, take decisions in conditions of uncertainty, improve productivity). In addition to that, the undisputed competence of Academia on specific research topics and the experience of the Advanced School on training addressed to Istat staff, all will be focused on the target to design an effective and comprehensive training in official statistic.

20. A modular approach is foreseen: given a large set of competencies to be enhanced – not only on the statistical side, but also on management of human resources and complex processes, on communication and data dissemination, on the use of new technologies - a program is being set up in cooperation between the three actors. It will be offered to Istat researchers and available also to functionaries in the Italian statistical system and to other professionals in research institutions. The use of English both for the preparation of materials and during the lessons will make it fit for the purpose of widening the audience to staff of other NSIs or international organizations. Once established the overall framework, the choice of first modules to be offered will depend on where the strongest competencies lie and the strongest needs are.

21. Likely, the first strand of development will start from the consideration that in a period of “data deluge” Istat (but NSIs in general) may have to face the paradox of data shortage. Budget constraints and organizational problems often limit the capability of collecting data on special issues and surely hinder the possibility to design statistical surveys producing significant estimates for small domains. This can end in a data shortage especially at local level where many of the actions decided at national level should be applied, and claims for a new set of methods to clear these obstacles. At the same time, governmental agencies offer a wide changing pattern of information often timely stored and maintained in administrative and open data systems. NSIs staff need to update and enhance their training in exploiting new sources of data and integrating them.
22. Teaching will be provided by tenured professors, with an international reputation in the specific field, particularly interested in practical applications of theory, and to Istat experts who can act as teachers in selected part of the program, bringing into play their professional capacities: knowledge of data production processes, competencies in applied research, experience in training.

Conclusions

23. To keep up the pace with policy needs and with technological and methodological improvements, in a period of budget restraints, ESS as a whole and NSIs have to redesign their processes. That implies an important investment in training. A shared European program, involving both statistical bodies and European universities - via a systematization of programs already being carried out and fostering the setting out of new ones - could result in a new, effective tool for improving official statistics.
24. The issue of financing the program has to be taken in serious consideration. In the present time, it could prove to be quite awkward to set up any new proposal about training. And an international program involves the risk of having costs as high as its ambitions. In order to encourage national involvement, the EU support would be crucial, based on the need for “better statistics for better policy” at the European level. President Barroso recently declared: “implementing the overall response to the crisis will require sound, high quality data and statistical analysis, on which decisions can be based”² and that implies stronger and more effective NSIs, and ESS.
25. Efforts would be worthwhile from the NSIs point of view, offering the unique opportunity to improve their international standing, to factually contribute to the development of the ESS and to enhance their staff skill together with the quality level of their production of statistical information. It would be beneficial for Eurostat, thus fulfilling its mission to provide better statistics for EU policy making and to proceed in the process of building up the ESS, and for universities, opening new perspectives of collaboration on official statistics.

² Opening speech at the Eurostat conference "Statistics for policymaking: Europe 2020" (Brussels 2011).

26. A multiplicity of training needs is to be faced, both in the initial education segment and as continuous training, at a basic-intermediate level and in advanced training. It claims for a strong planning effort, which Eurostat can effectively lead but will require also a significant involvement on the side of NSIs and of academic institutions. The aim should be to succeed in producing not only a systematization of programs already being carried out in Europe, but a new, effective and innovative tool for improving official statistics in EU.