

European Master in Official Statistics in use: short-term goals vs. long-term vision

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Abstract

The European Master in Official Statistics (EMOS) was launched by Eurostat in 2014. Following the first EMOS call, the European Statistical System Committee awarded twelve Master programmes with the EMOS label in May 2015. In autumn 2015 the second EMOS call for applications was published and the next round of Master programmes are awarded the EMOS label in May 2016.

With the running EMOS programmes, a number of activities have been launched or are about to be launched and these should be relatively quick wins. Given that EMOS represents not only a label, but also a growing European network of universities, NSIs, Central Banks and other data producers, networking activities such as workshops, open days, summer schools and thematic webinars are extremely important and other ways of connecting different actors should therefore be further developed in order to facilitate networking, sharing and cross-border exchanges and to enhance the European dimension of EMOS.

Another relevant and perhaps longer-term consideration for EMOS is how to use it for continuous training of staff already working in NSIs. In this respect, and despite the intrinsic differences in the target groups, it will be important to further explore synergies between internal training in statistical offices, the European Statistical Training Programme and EMOS.

With these developments in mind, the first graduates from EMOS Master programmes will be ready for the labour market in spring 2017. Therefore, it is now time for recruiting data producers to see how EMOS graduates can bring added-value to the national statistical institutes and quality of official statistics.

Keywords: Official statistics, statistical education, lifelong learning.

1. Introduction

After several years of discussions at different levels and a feasibility study commission by Eurostat, the European Statistical System (ESS) Committee endorsed the approach and

roadmap for the implementation of the European Master in Official Statistics (EMOS) in its 21st meeting of 14/15 May 2014 where it also "underlined the importance of a harmonised implementation of EMOS based on a set of clear and transparent criteria".¹ Following the first EMOS call in 2014, the ESS Committee awarded the first twelve Master programmes² with the EMOS label in May 2015. Building on the success and lessons learned from the first call, a second call for applications was published in autumn 2015, and the next round of Master programmes are awarded the EMOS label in May 2016.

The interest expressed by the universities (in cooperation with the respective National Statistical Institute (NSI), Other National Authority or National Central Bank) during the two calls for applications proves that EMOS is seen as an attractive label for several reasons such as employability opportunities for students, networking opportunities for universities, and the European dimension, to mention but a few. The ESS has its own interest in EMOS starting from statistical literacy and raising the awareness of official statistics to training their own staff members and building a recruitment pool of young well qualified statisticians.

The current status of EMOS is a right moment for the ESS, facilitated by Eurostat, to actively work with the universities and build a functioning network so that the results could feed into the further development of the label and continued success of EMOS. To this end, a number of concrete activities had been developed or are about to be launched by Eurostat; however, the engagement of NSIs remains crucial while collaborating with the EMOS Master programmes and within the network and opening their doors to the EMOS graduates.

Based on the opinions expressed by the ESS Committee in its meetings, the feasibility study carried out during 2013³ and the results of the different EMOS workshops organised by

¹ See <http://ec.europa.eu/eurostat/cros/sites/crosportal/files/EMOS%20at%20the%20ESSC.pdf>.

² See http://ec.europa.eu/eurostat/cros/content/emos-labelled-universities_en.

³ See https://ec.europa.eu/eurostat/cros/content/results-feasibility-study_en.

Eurostat between 2014 and 2015⁴, there are several groups of inter-dependent stakeholders with their own - even though interdependent - expectations for EMOS, and the following chapter focuses on the ones important for the ESS and looks into the implementing measures.

2. From quick wins towards long-term objectives

2.1. Harmonising European statistics.

One of the benefits of EMOS that the ESS emphasised was quality of European statistics through standardisation of data and processes at the European level (Stakeholders Analysis, 2013). The EMOS curriculum brings out the added value of official statistics from the point of view of process quality, output quality, and institutional environment as provided for in the European Statistics Code of Practice and guaranteed by the amended Regulation No 223/2009⁵. This is supported by the implementation of the EMOS curriculum in close cooperation with national statistical producers, which should bring academics and official statisticians closer, align teaching modules, and create a common language and knowledge in European official statistics.

As defined in the EMOS Guide for Applicants⁶, the EMOS curriculum builds on the learning outcomes⁷ and includes an internship in a national statistical office and a Master thesis on the topic relevant to official statistics and, ideally, supported by the NSI. The EMOS Board, an important body in the governance structure of EMOS and for the development of the label, has worked out the guidelines that could act as an aid for NSIs hosting EMOS trainees. Equally important is the support to teaching capacity, in particular when it comes to subjects related to

⁴ See https://ec.europa.eu/eurostat/cros/content/results_en.

⁵ Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European statistics as amended by Regulation (EU) 2015/759 of the European Parliament and of the Council of 29 April 2015 amending Regulation (EC) No 223/2009 on European statistics.

⁶ See https://ec.europa.eu/eurostat/cros/content/annex-1-guide-applicants_en.

⁷ First developed by the Group of Experts and were further refined by the EMOS Board.

the system of official statistics. Already at this stage the training material of the European Statistical Training Programme (ESTP) can be freely used by both universities and NSIs alike⁸; however, there should be further initiatives encouraging the universities and NSIs to share their training material.

With regard to the content of EMOS curriculum, there is a strong belief among academia that the education of a future official statistician should build on classical statistical knowledge⁹; however, the need to be prepared for the demands raised by the data revolution and the competition from the private sector is more than ever present. These aspects are reflected in the learning outcomes to a certain extent, but the role of the NSIs will be crucial in emphasising their importance while clearly communicating these needs to both universities and students.

Finally, the first EMOS graduates will leave universities already this year. The recruiting statistical offices will be able to benefit from the recruits who have knowledge and understanding of the underlying principles of official statistics. At the same time, it will be an opportunity to assess how well the EMOS curriculum is adapted to the current and future needs of official statistics and to influence a further review of the EMOS content.

2.2. Meeting recruitment and training needs of official statistics.

During the discussions on a European Master in Official Statistics that took place in Southampton back in 2010, the question was raised whether an EMOS, co-funded by NSIs, should be a professional programme to primarily meet continuous professional training needs

⁸ As provided for in the Tender Specifications 2010/S 1-000099 and ESTAT/A/2014/023, all ESTP course material procured in the context of these tenders is the property of Eurostat for subsequent use. For training material please see <https://circabc.europa.eu/w/browse/6ade1ca8-6a06-44bd-bff0-498217d0ec05>.

⁹ Confirmed through discussions with professors responsible for or involved in the first EMOS Master programmes during the EMOS Open Day organised by Eurostat in Luxembourg on 21-22 April 2015. See https://ec.europa.eu/eurostat/cros/content/emos-open-day-2016_en.

in NSIs or rather a Master programme that would produce highly-qualified graduates and potential recruits for statistical offices. The answer back then was life-long learning for NSI staff. In 2012, Eurostat argued the case of statistical literacy for statistical producers as much as users and saw NSIs as an essential partner in the design and implementation of EMOS (Kofoed et al., 2012).

Today both purposes of EMOS - as a solution for professional development and a "breeding place" for future official statisticians - are relevant. In this regard, Everaers talks about the change of the statistician's profile and raises the issues of gap of knowledge and war for talent. With the buzz words 'big data', 'administrative sources', 'cloud computing', 'warehouse data' already being a reality and raising new demands in the statistical profile, official statistics institutes are competing for graduates with data skills, and EMOS could be a part of the solution in educating (Everaers, 2015).

The University of Southampton¹⁰ in the UK and the *École nationale de la statistique et de l'analyse de l'information* (ENSAI)¹¹ in France are good examples of a long-established tradition of educating NSI staff in cooperation with the respective NSIs. However, EMOS enables both universities and NSIs to look for new cooperation models while taking advantage of the newly-created or enhanced cooperation on EMOS internships, Master theses and teaching of official statistics. Even though the two target groups for a Master degree and continuous professional training have intrinsic differences mainly due to different professional experience and different ways of learning, such a heterogeneous audience - if thoughtfully approached - could offer some interesting cross-fertilisation of knowledge and experience. Therefore, it is important to further explore synergies between internal training in statistical offices, ESTP, and EMOS.

¹⁰ See http://www.southampton.ac.uk/demography/postgraduate/taught_courses/msc_official_statistics.page?

¹¹ See <http://www.ensai.fr/formation/master-statistique-publique.html>.

Moreover, NSIs expect EMOS to deliver highly qualified recruits with a reduced gap between theory and application in statistics and an ability to integrate new technologies and methodological innovations¹². These are the benefits also shared by students, a very important stakeholder group for EMOS. As revealed by the stakeholder analysis of the Feasibility study¹³, they would be interested in EMOS if they could expect better qualifications, more employment opportunities at national and European level, better jobs and salaries, internships in NSIs, scholarship opportunities, European mobility as well as participation in EMOS students and alumni networks.

The first EMOS postgraduates will be available already this year, with a further estimate of 150 Master students graduating in 2017. As an add-on to the major subject of their Master programmes, these graduates will have the knowledge and understanding of official statistics, including the statistical principles in the European Statistics Code of Practice and their application to the different steps of data production and dissemination of European statistics, otherwise not available in other Master programmes (cf. learning outcomes). These graduates will be able to design and manage data production processes, including the definition of the main dimensions of quality and how to monitor and evaluate them. They will also have had first-hand practical experience in an institute of official statistics (NSI, ONA, NCB or statistical department of an international organisation) and will have worked on a Master thesis in the area of official statistics. All this and notably their interest and strong motivation to work in the field of official statistics should distinguish them from other university graduates while selecting future employees of statistical offices.

¹² See results of the 4th EMOS Workshop https://ec.europa.eu/eurostat/cros/content/results_en.

¹³ See Stakeholders Analysis carried out under the feasibility study <https://ec.europa.eu/eurostat/cros/sites/crosportal/files/2%20-%20GExp%20-%20-%20Stakeholders%2014-11-2013.pdf>.

2.3 Creating synergies and efficiency gains.

In times of reduced resources and pressure for efficiency gains, EMOS should serve to create networks and synergies. As mentioned above, further synergies should be explored in the ESTP, EMOS, and internal training.



Figure 1. Eurostat's statistical training programme for 2016

As an example, a part of Eurostat's internal statistical training programme (**Fig. 1**) focuses on different levels of statistical methods. A number of these training courses are relevant for a

very low number of participants, e.g. new recruits or colleagues under retraining. Any gap to bridge or revision of a subject could be easily and efficiently done via a module of a university programme.

Thus use of EMOS for (re-)training NSI staff members could support an efficient use of resources. Similarly, participation in ESTP courses, which are mainly targeted at ESS staff, could be opened up to EMOS students, thus allowing fruitful exchanges and access to inside knowledge.

Moreover, cooperation in teaching, projects, internships and Master theses should be enhanced through mechanisms facilitating cross-border exchanges out of the scope of ERASMUS+ and Erasmus Mundus JMD, e.g. a platform for exchange of information on research topics, projects, ideas, available internships, and teaching staff.

In addition, the following activities should be continuously organised or further developed:

EMOS workshops will be continuously be organised to bring the community closer and enhance collaboration and exchanges.

- The webinar organised by Eurostat in cooperation with the Universities of Trier, Pisa and Manchester¹⁴ serves as a good example of use of modern communication tools creating synergies, networks, and the European dimension. The possibility to use webinars for cross-border teaching should be further explored; moreover, webinars or webstreaming could be a good solution for NSI staff training.
- Eurostat has also launched EMOS Open Days¹⁵ which should offer a glimpse into the functioning of the ESS, Eurostat, and some statistical issues to EMOS professors. At the same time, the meetings help create dialogue between universities and Eurostat and

¹⁴ See http://ec.europa.eu/eurostat/cros/content/emos-spring-school-2015_en. Also see https://ec.europa.eu/eurostat/cros/content/joint-eframe-summer-school_en.

¹⁵ See https://ec.europa.eu/eurostat/cros/content/emos-open-day-2016_en.

foster an understanding of each other's needs. Comparable events at the national level could also be organised for students, in particular with a view to attracting bachelor students to EMOS programmes.

- Finally, other projects such as the European Statistical Week (ESW) are in the development phase. The new ESW¹⁶ should bring junior statisticians from NSIs and EMOS students together for a series of presentations on different issues ranging from the ESS and the European Statistics Code of Practice to statistics modernisation projects and big data, and for two days of job shadowing in one of the units in Eurostat.

3. Conclusions

With the first EMOS programmes running, some activities have already been launched; however, networking and cooperation in the form of international workshops, open days, cross-border seminars, summer schools and thematic webinars should be further developed at the European and national levels. With an adequate commitment and resources, these should be relatively quick yet very important wins for the development of the EMOS network and the European dimension of EMOS.

At the same time it is important to further explore synergies between internal training in statistical offices, the ESTP, and EMOS. As an example, EMOS could be used for continuous training of NSI staff members, while some ESTP courses could be opened up for EMOS students.

The strength of the network will have a direct impact on the added-value of the EMOS label and the ability of EMOS to attract students. EMOS could be an excellent tool to promote official statistics vis-à-vis policy makers as the only reliable statistics as compared to private

¹⁶ For the 2014 edition of the European Statistical Week see <https://circabc.europa.eu/w/browse/52445734-6c48-422a-90e3-1c45482c7d7a>.

producers, and an active involvement of NSIs is equally important at all stages: when attracting students to EMOS, during the course of the programme, and providing support to EMOS alumni. The first graduates from EMOS Master programmes will soon be ready for the labour market. Therefore, the time has come for recruiting NSIs to reflect on how to integrate EMOS graduates and bring added-value to EMOS in the long run.

4. References

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