

QUALITY ASSESSMENT OF STATISTICS IN EUSTAT

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Abstract

In this paper we will try to show how the quality assessment of statistics is deployed in the Basque Statistics Institute in the framework of quality management. Assessment is considered an important and final step in the statistical production process and we intend to conduct it in a standardised periodic way.

Assessment is seen in Eustat as an internal reflection that the responsible for the statistics makes with his/her team about the quality of them so that some improvements for the new cycle can be introduced.

In this paper we will explain how we have introduced this step of the statistical procedure; first of all the questionnaire for the assessment has been developed as an adaptation of the Eurostat's DESAP; also an assessment protocol and a standard report have been designed to guide the assessment and save the results that will be monitored for the following years.

We will show how these tools have been tested during last years in a subset of ten statistics, from various fields and of different methodologies, and how the preliminary version of the tools has been updated through the opinions and suggestions of the teams in order to comply with the aims and characteristics of the Basque Institute. Then the assessment procedure has been extended to the whole organization.

This paper will detail aspects such as the identification of the survey teams, the length of the assessment, the types of assessed statistics, the difficulties and positive features found while introducing and adapting the DESAP procedure to Eustat's peculiarities.

Finally we will present our plans for future developments and improvements, such as the migration of the Excel application to a web questionnaire, the introduction of a Basque language version of it and the extension of the assessment to statistics produced by other regional statistical producers.

Keywords: Quality assessment, survey team, assessment tools, improvement, difficulties.

1. Background

In the early 2000s concern about quality management and quality of management of statistical production resulted in the development of specific *technical projects*. These were seen as a fundamental tool for controlling the quality of statistical production, in addition to constituting a basic pillar of knowledge transfer within Eustat. A peer review undertaken in the same period meant there was also an initial external report on Eustat's situation in relation to quality and good practice. Later, self-assessment were carried out, first in 2006 and then in 2010, following the EFQM model as a quality management tool.

The EFQM model is based on a "framework of processes and procedures used to ensure that the organisation fulfils all tasks required to achieve its objectives". The processes map concept is introduced to identify the different processes existing in an organisation and their interrelation. This enables to obtain a global vision of the organisation.

Eustat develops its own Processes Map which includes the process of statistical production that details all production phases, stages and tasks and identifies a final phase referred to the Assessment.

Although Eustat was aware of measuring quality in statistical production before, it was recently when a detailed and systematic approach was taken and introduced in the organisation to assess the quality in all its statistical production.

2. Managing the assessment process

2.1. First steps.

The project to develop a procedure for incorporating assessment as the final phase of the statistical operation process was managed by the process team, under the leadership of the management team of Eustat. Therefore, the project was considered and treated by the organisation as strategic. Some basic foundations were defined *a priori*.

- *The concept of assessment.*

Assessment is defined as an output of a deep reflection about the statistical operation made by the operation team, headed by its responsible. It is not an external control but rather a self-evaluation of the way to improve all and each of the phases and tasks of the operation.

- *The operation team.*

The analysis of the statistical operation process defines the operation team as the group of people from different Departments who participate in some of the phases of the operation.

Given the size of Eustat, there is just one responsible person assigned permanently to each operation, the Operation Manager. Other people dedicate part of their time, depending on the specific statistical tasks, their participation in other operations and the size of the Department in which they work. For instance, the Dissemination and Marketing and the Methodology Departments are relatively small so there is a need of participating in several operations.

- *The DESAP questionnaire.*

The DESAP – Development of a Self-Assessment Programme – questionnaire developed by the Lithuanian Statistical Institute for Eurostat was chosen as the assessment tool.

2.2. Pilot study.

A pilot study was carried out using one of Eustat's statistical operations, the Private Education Expenditure and Financing Statistics. This operation was chosen because, amongst other reasons, it is a standard statistic, in the sense that it includes practically all the usual phases of a statistical survey. And, furthermore, there was a real need of introducing improvements in this statistics operation due to both external and internal facts. A specific group was created to undertake the pilot assessment. This included the operation team and also additional individuals whose role was to design an assessment procedure suitable for Eustat.

This pilot study generated an assessment protocol and developed the assessment tools. These findings and tools were extended to 10 more operations, selected to better represent the whole scope of Eustat statistical production. The aim was to identify core procedural difficulties and any adjustments that may needed to be implemented. Brainstorming sessions were organised with these operational teams to reach this objective. Once all the findings were introduced in

the protocol and the questionnaires, the systematic assessment procedure was extended across the whole organisation, following several training sessions for the whole staff.

3. The assessment procedure at Eustat

3.1. Adapting Eurostat's DESAP questionnaire.

The starting point was a translated version of the English language Eurostat DESAP questionnaire. Certain terms were adapted to Eustat's context; for instance, aspects relating to the glossary and legal and administrative settings of the Basque Statistical Organisation.

3.2. The assessment protocol.

Eustat has developed and approved an assessment protocol that will be used as a guide for carrying out the assessment taking into account its main dimensions. Some of these are outlined below.

Who? Assessment is the responsibility of the operation team that includes the Department responsible for the operation and the other participating departments. The burden falls directly on the Operation Manager, who is the sole responsible for completing the questionnaire, with the assistance of those team partners needed for each of the section included in the questionnaire. The Operation Manager must inform the Heads of the Departments involved in the statistical operation when the process begins.

How? The Eurostat DESAP questionnaire adapted for Eustat will be used. There are two versions, DESAP_E, a full questionnaire, and DESAP_C, a shortened questionnaire. Both are available in Excel format. The full questionnaire covers all the phases of a statistical operation in detail, starting with the reasons of carrying out the operation itself, and including the analysis of Eurostat quality criteria. It includes specific sections for writing down any thoughts and reflections that may arise during the evaluation. The results are drawn in a summary graph. The shortened questionnaire concentrates on assessing Eurostat quality criteria. It is established that the full questionnaire will be used the first time the assessment is carried out for all operations. Then, operations differ depending on their frequency. The full questionnaire will also be used once every 5 years for at least yearly operations. All other

years, short questionnaires will be used. For less frequent operations the full questionnaire will be applied every time they might be evaluated.

3.3. Improvements for the next statistical release.

Following the review of the operation, a series of changes to be introduced in following statistical releases are identified. The aim is always to improve quality, bring it more up to date and better meet evolving user needs.

The improvements to be introduced are classified in two categories: minor and major. Minor changes are tackled by the operation team itself, and introduced either immediately or, when this is not possible, distributed to be introduced over the following years. Major improvements, on the other side, are assigned to a specific *ad-hoc* team that will manage them.

3.4. The assessment report.

A standard assessment report has been designed so it is straightforward to consult it for team members or Heads of Departments involved in the operation. It can also be consulted by the Eustat Directorate.

The final report should include an introduction and a list of the correct and improvable parts of each section of the DESAP. Furthermore, it should also detail any thoughts that arose, conclusions and proposals for the next edition of the operation or for staggered introduction over the following years. This report is reviewed by the corresponding Head of the Department, who should approve the proposal to carry out the improvements.

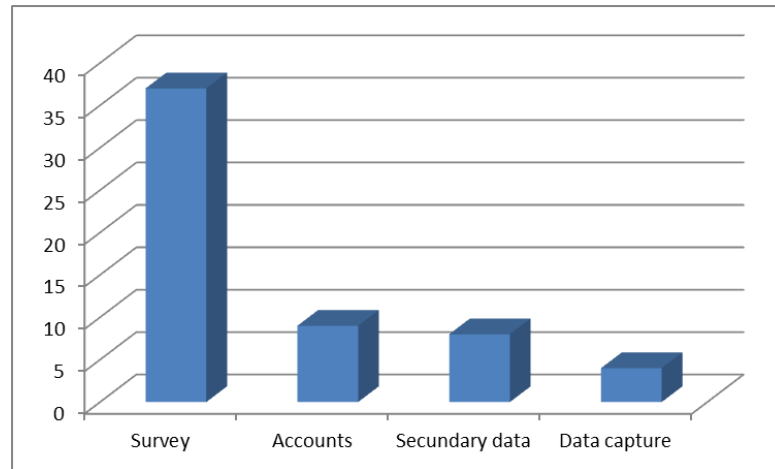
4. Initial conclusions after two years of use

4.1. Opinions and suggestions of the assessment teams.

Eustat's aim has been to assess all statistical operations of the organisation using the standard developed tools. However, this is not an easy task, as the DESAP questionnaire is not equally adaptable to all the operations, as many of them are far from being traditional statistics, based on surveys. For instance, out of the 58 assessments finished by March 2016, nine of them refer

to Synthesis Statistics (e.g. Economic Accounts), eight of them make use of secondary or external information and four of them consist just of data collection.

Graph 1: Assessments by type of statistical operation.



The opinion of the operation teams, that have undertaken assessments during these years, has been sought in order to improve the instruments used and better meet actual operational requirements. However, it can be concluded that the DESAP is useful only when it is used in a flexible and intelligent way, adapting the revision stages and concepts to the specific characteristics of each operation. For instance, in some cases other statistical operations, and not always families or establishments, might be informants or users of a given operation.

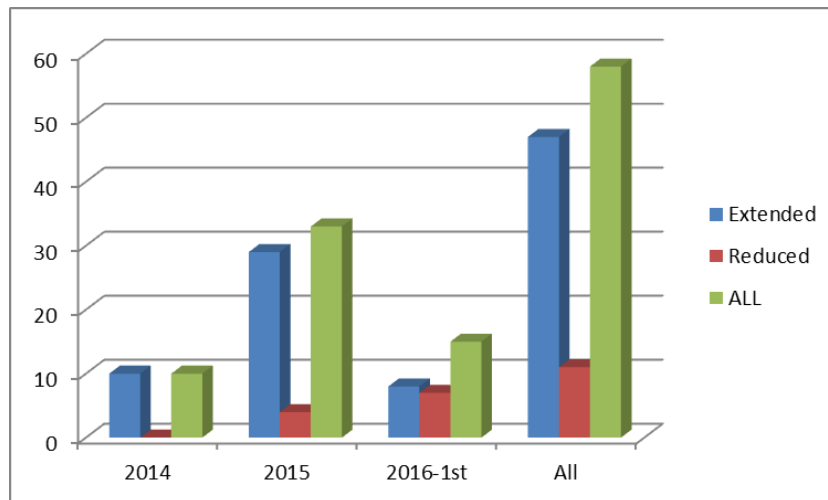
It has been found the number of members of the assessment teams have oscillated between 2.9 (operations using secondary or external data) and 4.8 (survey based statistics). The average number of days (in most cases part time) used for the assessment has varied between 19.3 days for the former and 34.5 days for those that involve solely data capture. Nevertheless, it is still believed that one full time complete week is a reasonable amount of time for carrying out the assessment.

4.2. Introducing reduced assessment or monitoring.

An attempt has been made to adapt the assessment procedure to Eustat methods, by means of the introduction of the simplified assessment in 2015. Briefly, this is a procedure that aims to

control the introduction of previously identified improvements and to monitor the results they produce, while allowing the incorporation of any new ideas and suggestions that may arise.

Graph 2: Assessments by year and assessment method.



The simplified assessment focuses on the main Eurostat quality aspects. Around 75% of all assessments within a year should be simplified assessments. The effort needed for the assessments themselves and the introduction to all minor and major improvements is, otherwise, difficult to manage for Eustat.

5. The future of assessment

5.1. *Introducing the Basque language into the assessment.*

Eustat intends to produce a Basque language version of the assessment tools and, in particular, of the assessment questionnaires and the glossary of statistical terms used. However, before this can be done the terminology in the different production Departments, and even in the different statistical operations, needs to be standardised. It might be the case that the same task or process is referred to in different ways.

5.2. *Preparing a web questionnaire.*

After starting to use the DESAP_E in Excel, Eustat's version of Office has been upgraded and the macros that guide completion cannot be used easily. In addition, the use of end user tools scatters the assessment documentation and complicates both its analysis and the introduction of improvements in the procedure itself.

Therefore, Eustat is going to introduce a web application for carrying out the assessments, in Basque and Spanish, for both the full and the shortened versions. A database for the information archive will be associated with an assistant that helps with the writing of the final report, including the assessment graph.

5.3. Extending the procedure to other Basque official statistical producers.

Eustat has the function of coordinating the statistical bodies that produce official statistics in Basque Government Departments; included in this is the revision and approval of technical projects and the methodological support to carry them out. Consequently, it would be reasonable to consider extending the assessment procedure to the statistical operations carried out by other producers. The web questionnaire would facilitate the introduction of the procedure across all the Basque Statistical System.