Science and technology: production and development of Community statistics

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The Commission presents a report on the implementation of Decision No 1608/2003/EC of the European Parliament and of the Council on science and technology statistics It has implemented this Decision in close cooperation with Member States through regulatory measures, voluntary data collections and through the Union's statistical authority (Eurostat)'s own data production.

This third report evaluates the **implementation of the individual statistical actions** listed in the Decision. These are aimed at establishing a statistical information system on science, technology and innovation to support and monitor EU policies. The report mainly covers developments since the previous report in 2011.

Implementation of the Decision: the Commission has implemented the Decision through regulatory measures and voluntary data collections in the Member States and through Eurostat's own statistical production.

In 2012, two 2004 Regulations were replaced by Commission Implementing Regulation (EU) No 995/201210, which also amended the detailed requirements for R&D, other science and technology, and innovation statistics. By specifying the statistical unit required and the uniform quality reporting, the Regulation also took a further step towards **harmonising R&D and innovation statistics** and strengthening the link with general business statistics.

The **main achievements** in the period covered by this report were as follows:

- continued growth in the data production volume of R&D expenditure and personnel data, compiled in various dimensions and breakdowns based on the Frascati Manual (OECD 2002);
- conclusion of an agreement on a further breakdown of data on ‘R&D funded from abroad’;
- development of a methodology was developed for measuring trans-nationally coordinated research in Europe;
- initiation of a more complete collection of information on public funding to ICT R&D from the business enterprise sector;
- preparation of the 2012 Community innovation survey on the basis of the Oslo Manual (OECD, Eurostat 2005) to measure the innovation performance of enterprises using a harmonised survey methodology;
- faster access to Community innovation survey data at individual enterprise level (‘microdata’) via Eurostat’s SAFE Centre and CD-ROM releases for external researchers; access now also includes the 2010 data set;
- improvement of the quality and harmonisation of STI data through established quality reporting and the introduction of new quality measures;

- beginning of work on streamlining national data and metadata transmissions by working towards the use of the common ESS tools to support a more efficient and standardised production process;

- improved data production processes in the ESS and more robust follow-up routines;

- setting up of regular data production on employment in knowledge-intensive activities, using an agreed methodology for classification of such activities;

- beginning regular data processing of statistics on Community trade marks and Community designs in 2013;

- publication of She Figures, the Commission's 2012 report on women's role in science, facilitated by gender breakdowns of data, where appropriate.

Data quality, cost and burden: in terms of data quality, the report stresses that constant efforts are required to convey concisely but precisely to enterprise respondents what they are being asked for (new or significantly improved products and processes) and encourage them to process the desired information. Similarly quantification of the turnover from innovative products and the innovation expenditures remain challenging to be measured.

Eurostat's most recent overall analysis of response burden and production costs in the Member States, launched for 2010, assessed the costs of producing STI (R&D and innovation) statistics as 'medium' and the response burden as 'medium/high'.

Continuing the development of STI statistics: in its Communication on the Innovation Union Flagship Initiative, the Commission proposed an additional indicator reflecting R&D and innovation intensity as well as an annual Innovation Union Scoreboard for monitoring overall progress in innovation performance.

Changes in the environment : the next step will be to strengthen the link with other business statistics by including R&D and innovation statistics in a future 'Framework Regulation integrating business statistics', currently under discussion within the ESS.

On various occasions in recent years, national statistical authorities have reported a lack of

Resources. The Commission considers that priority setting is therefore more crucial than ever, for existing and planned statistical operations alike.

Improving and evaluating existing STI statistics: statistics need to be sound and fit for purpose. Existing data collections, on R&D and innovation in particular, will be kept under constant relevance and quality review through the full use of regular compliance monitoring and systematic collection of quality reports.

For European innovation statistics, an assessment will be made as to whether extending the coverage (to all business activities, the entire economy) would add sufficient new information to justify the additional resources needed and if this would be methodologically feasible.

New indicators, new uses: new indicators and new data sources will frequently be requested by the user community. In light of tighter budgets, development work which goes beyond using the existing data sources, including new indicators, new data sources and even further breakdowns of the existing data (as they may involve larger sample sizes or methodological work), will take place only after thorough screening and, to the extent possible, cost/benefit analysis.