



Office for
Statistics Regulation

Regulatory Guidance

Experimental statistics – official statistics in development

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About this guide

This guide sets out the Office for Statistics Regulation's expectations regarding the production and handling of experimental statistics, a subset of official statistics going through development and evaluation, in line with the [Code of Practice for Statistics](#).

The GSS Good Practice Team has [published guidance](#) on the GSS Policy and Guidance Hub on best practice in relation to experimental statistics for statistics producers.

Experimental statistics are a subset of newly developed or innovative official statistics undergoing evaluation. They are developed under the guidance of the Head of Profession for Statistics (HoP) and published to involve users and stakeholders in the assessment of their suitability and quality at an early stage.

Code of Practice for Statistics

Innovation and engagement

The Code of Practice encourages innovation and improvement and highlights the need for National Statistics and other official statistics to remain relevant for use, to provide a dynamic public service.

This is not a call for change for change's sake. Instead producers should keep alert to the developments and opportunities in evolving technologies and methods, to improve estimates, to better meet the public good.

It requires a growing understanding of emerging user needs, to support producers in recognising when existing statistics are no longer relevant and can be replaced by new or improved statistics.

Experimental statistics status provides a clear statement of the nature of the official statistics going through development, with a potentially wider degree of uncertainty in the resulting estimates as the methods and processes are established and verified.

Testing of the experimental statistics allows producers to gain a good understanding of their quality, including their accuracy and reliability, and their value. Users are central to this process – without their involvement, producers will have an incomplete understanding of the suitability of the statistics.

Development approach

The overall goal should be to ensure that the experimental statistics are used to develop statistics that can go onto meet the standards of the Code of Practice for Statistics. The evaluation should determine whether the statistics are of sufficient quality and value to be published as official statistics. If they are not, the development and production should stop. However, where the statistics are useful and there is the potential to improve the quality, the development should continue to try and realise it.

Openness and transparency about the development, the decision-making process and the nature of the evaluation is important. It is essential for the effective and timely completion of the statistics development that a plan is used that makes clear the points at which evaluation will be conducted.

When producing experimental statistics, it may be helpful to describe the development in terms of who, why, what, and when.

Who: Producers should be clear about who is carrying out the development and testing. They should also be clear about how they will involve users and method or topic experts in the process, and work to get their active involvement.

Why: Producers should help users understand the breadth of the development, why it is needed and important – the potential value that the new or re-developed statistics may offer.

What: Producers should be specific in setting out the scope and nature of the development. They should also be clear about the criteria being used to decide whether the statistics are of sufficient quality and how they will determine that the statistics meet users' needs. They should be clear on what can be achieved with the available resources.

When: An essential element of developing experimental statistics is that the process is time-bound. This means that producers should set out the timeframe that they expect the development to run, giving a clear idea of expected milestones. It may be that the development runs for months or even several years – it is important that the likely period of development is set out.

As evaluation proceeds, it may be the case that the plan needs to be revised. Again, being open about changes to the plan is important and helps maintain user confidence in the statistics and the producers.

The conclusion of the development will be the producer's judgement of one of three outcomes:

1. The statistics are of sufficient quality and value to be used in a meaningful way and so be published as official statistics.
2. The statistics are of insufficient quality or do not meet the required need and so production will be stopped.
3. There is insufficient evidence to reach a conclusion or further refinement is requirement – producers would continue the development and be clear about extent of further testing.

When the producer, under the guidance of the Head of Profession, decides that the statistics are useful and of sufficient quality, they should publish the statistics as official statistics, making clear the basis of their decision.

The label 'experimental statistics' should not be used indefinitely. Some producers have used the label to indicate that the statistics are of poor quality – that is also not appropriate. It is worth statistics producers reviewing their existing experimental statistics to be certain that a development and evaluation should continue. Where a development has concluded and the production of the

statistics is continuing, then the label of ‘experimental statistics’ should be removed; the statistics should be published as ‘official statistics’, making sure to describe their strengths and limitations.

National statistics

Experimental statistics development is applicable to and valuable for National Statistics. To fully meet the standards of the Code of Practice, it is important that producers of National Statistics remain vigilant to identify the opportunities to improve the statistics where appropriate. The world and society continually evolve so it is essential that our most important statistics keep up – a message underlined in the [Independent Review of Economic Statistics](#) by Sir Charles Bean.

We strongly encourage producers to maintain the relevance of their National Statistics. The use of experimental statistics provides an excellent means of demonstrating innovation and improvement, while at the same time showing how the statistics can be appropriately used and understood, with producers then using that knowledge to feed back into the development.

The particular National Statistics being redeveloped would be relabelled as ‘experimental statistics’, but only after receiving the agreement of the Office for Statistics Regulation (OSR), since under the *Statistics and Registration Service Act 2007* the NS designation can only be removed with the approval of the regulator. At the end of the project, OSR would conduct either a compliance check or an assessment, to determine that the designation as National Statistics can be reapplied.

Case study: ONS's labour productivity statistics

ONS has undertaken the development of experimental statistics as part of its wider development of productivity statistics, begun in 2018. It published [a development plan](#) that it has updated with progress and further information.

OSR completed a [compliance check](#) of the experimental statistics in May 2019. We particularly welcomed ONS's development of labour productivity data, which add additional insight to help understand the workings of the UK economy.

The OSR regulatory team found a great many positive aspects in the way that ONS produces and presents these statistics. This suite of statistics extends the reach and scope of labour productivity statistics to provide insights to more-detailed sectors within the devolved administrations and regions, and into what contributes to changes in productivity.

It is a great illustration of the principle of continually developing the statistics, to provide the insights that users need. ONS was proactive in developing insight from labour productivity data at UK and sub-UK levels. For example:

- ONS's [Review of international best practice in the production of productivity statistics](#) in 2018 found many aspects of labour productivity statistics to be world leading but recommended several improvements, for example increased industrial granularity and faster production speeds.
- ONS's article [Improving estimations of labour productivity and international comparisons](#) demonstrates the high priority that ONS attaches to meeting users' needs for better statistics to make better decisions. The range and quality of the labour productivity data contained within both the established bulletin and the additional experimental outputs are very impressive.
- The statistics team sought to balance the need for fresh and insightful commentary against the need for clear and consistent messages in the [Labour productivity: UK](#) statistical bulletins. It increased breadth and granularity of the data and so enabled users to answer questions such as to what extent do differences in regional productivity reflect differences in a region's industrial mix?
- ONS consulted the annual productivity forum in March 2019 and sought user feedback to inform the shape of the final format. We commended ONS on using different platforms to meet the different users' needs.

Once appropriate actions have been taken by ONS to address the requirements set out in our [compliance check letter](#), we will review extending the existing National Statistics status to these new statistics.

The Code of Practice and experimental statistics

The practices that are particularly relevant to producing experimental statistics are shown below:

Independent decision-making and leadership (T2)

T2.1 The Chief Statistician/Head of Profession for Statistics should have sole authority for deciding on methods, standards and procedures, and on the content and timing of the release of regular and *ad hoc* official statistics. This should include: determining the need for new official statistics, ceasing the release of official statistics, and the development of experimental statistics.

Sound methods (Q2)

Q2.2 Statistics, data and metadata should be compiled using recognised standards, classifications and definitions. They should be harmonised to be consistent and coherent with related statistics and data where possible. Users should be provided with reasons for deviations from these standards and explanations of any related implications for use.

Q2.3 Statistics producers should be transparent about methods used, giving the reasons for their selection. The level of detail of the explanation should be proportionate to the complexity of the methods chosen and reflect the needs of different types of users and uses.

Q2.4 Relevant limitations arising from the methods and their application, including bias and uncertainty, should be identified and explained to users. An indication of their likely scale and the steps taken to reduce their impact on the statistics should be included in the explanation.

Q2.5 Producers of statistics and data should provide users with advance notice about changes to methods, explaining why the changes are being made. A consistent time series should be produced, with back series provided where possible. Users should be made aware of the nature and extent of the change.

Q2.6 Statistics producers should collaborate with topic and methods experts and producers of related statistics and data wherever possible.

Relevance to users (V1)

V1.1 Statistics producers should maintain and refresh their understanding of the use and potential use of the statistics and data. They should consider the ways in which the statistics might be used and the nature of the decisions that are or could be informed by them.

V1.3 User satisfaction with the relevance and usefulness of the statistics and data should be reviewed routinely. This should consider the timeliness, accessibility, clarity and accuracy of the statistics and data.

V1.5 The views received from users, potential users and other stakeholders should be addressed, where practicable. Statistics producers should consider whether to produce new statistics to meet identified information gaps. Feedback should be provided to them about how their needs can and cannot be met, being transparent about reasons for the decisions made and any constraints.

V1.6 Statistics producers should periodically review whether to continue, discontinue, adapt or to provide the statistics through other means, in discussion with users and other stakeholders.

Innovation and improvement (V4)

V4.1 Statistics producers should keep up to date with developments that can improve statistics and data. They should be transparent in conducting their development activities, and be open about the outcomes and longer-term development plans.

V4.2 Statistics producers should consider testing and releasing new official statistics initially as experimental statistics, under the guidance of the Chief Statistician/Head of Profession for Statistics.

V4.3 Users should be involved in the ongoing development of statistics and data, exploring and testing statistical innovations, so that the statistics remain relevant and useful.

V4.4 Statistics producers should seek to collaborate with other producers, including within the UK and internationally, when developing their statistics, overcoming practical obstacles, and sharing best practice.

V4.5 Statistics producers should keep up to date with developments that might improve methods and quality. They should assess the added value of potential improvements and consider the likely impact on the statistics, including in relation to comparability and coherence.

V4.6 Producers should commit to improve data presentation, enhance insight, and better meet the needs of different types of users and potential users in the dissemination of their statistics and data.

V4.7 New and innovative ways to engage users, potential users and other stakeholders should be considered and adopted as appropriate.