

## **GSS Guidelines and training in methods and new software for seasonal adjustment**

The purpose of this project was to promote standardisation of the approach to seasonal adjustment across the Government Statistical Service (GSS) by raising awareness and providing support for the use of the GSS recommended software for seasonal adjustment, X-13ARIMA-SEATS.

Specifically the project provided three training courses and developed a document on practical guidance on X-13ARIMA-SEATS. The material for these courses was reviewed and improved based on feedback from the first courses on X-13ARIMA-SEATS that were developed under a previous project funded by the Quality Improvement Fund and the three courses were successfully delivered with students providing positive feedback. The document on practical guidance on X-13ARIMA-SEATS built on a draft guidance document to X-12-ARIMA (the predecessor to X-13ARIMA-SEATS). This document has been well developed over the period of the project. However, the project underestimated the amount of work required to update this very extensive document and so while the bulk of the work has been completed, the final editing of the document could not be completed within the budget and time scales initially planned.

The main intended outcomes of the project included the following:

- Increasing the use of X-13ARIMA-SEATS across the GSS and devolved administrations.
- Increasing awareness of seasonal adjustment and internationally recognised best practice across the GSS.
- Improving the quality of seasonally adjusted outputs from the GSS and devolved administrations based on accuracy, comparability, coherence, clarity and relevance.

The project achieved the first outcome providing training to statisticians from twenty different departments in the use of X-13ARIMA-SEATS. Feedback during the course suggested that a number of departments plan to move to using X-13ARIMA-SEATS. A limited number of departments provided feedback that due to restrictions in their IT they would not be able to implement the new software immediately. However, we have reached a good coverage of the GSS and made them aware of the recommended best practice.

The project has also achieved the second outcome as the training was delivered to fifty three statisticians from across the GSS and devolved administrations. Moreover, the advertising of these courses also raised interest in other training events covering seasonal adjustment and learning more about X-13ARIMA-SEATS, and as a consequence we have provided and continue to provide training on the use of X-13ARIMA-SEATS to many statisticians from across the GSS and devolved administrations.

In terms of improving the quality of seasonal adjustment across the GSS and devolved administrations this has most likely been partially achieved and we have not been able to assess this extensively. Some departments have requested additional assistance with seasonal adjustment and experts in time series analysis have provided further guidance leading to the improvement of a handful of GSS outputs. Feedback during the course indicated that some departments would make changes to the way in which they conduct seasonal adjustment following the advice provided during the course.

The capacity-building part of this project was to spread knowledge of X-13ARIMA-SEATS across the GSS and provide GSS statisticians with the skills to use the software. This has been satisfactorily achieved and will continue through the provision of seasonal adjustment training as part of the GSS statistical training programme and the support provided to the GSS from the time series analysis team in ONS.