Office for Statistics Regulation

UK Statistics Authority

Review of compliance with the Code of Practice for Statistics

# UK Trade Statistics

(produced by the Office for National Statistics)

Assessment Report 394

May 2025

## Office for Statistics Regulation

We provide independent regulation of all official statistics produced in the UK. Statistics are an essential public asset. We aim to enhance public confidence in the trustworthiness, quality and value of statistics produced by government.

We do this by setting the standards they must meet in the Code of Practice for Statistics. We ensure that producers of government statistics uphold these standards by conducting assessments against the Code. Those found to comply with the standards of trustworthiness, quality and value in the Code are given accredited official statistics status (called National Statistics in the Statistics and Registration Service Act 2007). We also report publicly on system-wide issues and on the way statistics are being used, celebrating when the standards are upheld and challenging publicly when they are not.

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# Overview

At the time of this review, the Office for National Statistics (ONS)'s UK trade statistics are published as official statistics, following their de-accreditation in 2014.

UK trade statistics measure the total value of UK exports and imports of goods and services in current prices, chained volume measures and implied deflators. They are an essential input into the National Accounts, Gross Domestic Product (GDP), quarterly Balance of Payments outputs and the annual Blue Book and Pink Book.

## Why we did this review

This review considers the progress ONS has already made, and the further work required before the trade statistics can be considered for re-accreditation.

In 2014, after being made aware of errors in the expenditure estimates for UK residents' visits abroad and overseas residents' visits to the UK, we removed the UK trade statistics' National Statistics status (now called accredited official statistics status). Given this error, and an error in data supply that occurred earlier that year, we completed a re-assessment against the Code in 2015. This assessment set out 13 requirements for ONS to meet before we would consider re-accrediting the statistics.

Trade statistics are key for use in policy and decision making. Therefore, it is essential that the trade statistics are of high quality and that users can trust that they comply with the Code of Practice for Statistics. This review covers the extent to which ONS has met the requirements from the assessment in 2015. Considering that it has been several years since this assessment, we also provide our current view of the trade statistics' compliance with the Code.

## Highlighted findings

- ONS has made significant progress since the UK trade statistics were de-accredited in 2014. ONS set out an ambitious development plan and committed to significant changes to improve the trade statistics, which has seen the frequency, coverage and granularity of outputs increase.
- To provide users with additional insights into the statistics, ONS has published several articles that, for example, provide information about data collection changes or specific trade topics.
- Revisions are an expected part of producing statistics, especially when the underlying data are survey-based. However, the revisions to the trade in services estimates are large and potentially biased.
- ONS has made significant progress to understand and begin quantifying the factors and causes of the UK's bilateral trade asymmetries. ONS produced several articles on its analysis of trade asymmetries, has been involved in international work and expanded the International Trade in Services survey to minimise asymmetries where possible.

- Further development work has been limited by high staff turnover, loss of knowledge and vacancies in the trade team. Additionally, inefficient and complex legacy systems slow down production and increase the risk of errors.

## Our judgement

ONS has made significant progress, and it is clear how much work has gone into improving and developing these statistics since their de-accreditation. However, based on our findings and engagement with users, we have concluded that some areas for improvement remain.

We have identified four requirements that ONS must fulfil for the statistics to be considered for re-accreditation. These requirements supersede the previous requirements from the 2015 assessment and are focused on the following areas:

- Improving information around and analysing the revisions to the trade in services estimates, including considering whether there is bias in early estimates.
- Bringing together existing work on trade asymmetries.
- Updating quality and methodology information.
- Reviewing resources, reducing single points of failure and a plan for improving systems.

## Next steps

ONS should meet these requirements within six months and update us on its progress.

# Our approach

1.1 This review considers the progress ONS has already made, and the further work required before the trade statistics can be considered for re-accreditation. We analysed ONS's evidence for meeting the 13 requirements set out in the 2015 assessment as well as the trade statistics' current compliance with the Code of Practice. For this, we compiled evidence from desk research and engagement with key stakeholders.

## Desk research

1.2 We looked at the monthly outputs published by ONS as well as supplementary documents, such as the Quality Methodology and Information report, the methodology document, published development plans and additional analysis articles.

## User engagement

1.3 We spoke to key users of the monthly UK trade statistics. OSR conducted 11 interviews from December 2024 to January 2025. Those interviewed included users from government departments and other stakeholders with an interest in UK trade statistics.

# Findings

2.1 Our findings are summarised into five key areas:

- communication with users
- the revisions of trade in services estimates
- trade asymmetries
- quality and methods documents
- resource, business continuity and capability

2.2 We have set out four requirements related to these areas. These requirements supersede the previous requirements from our assessment in 2015. We expect ONS to meet these requirements within six months and to update us on its progress.

## ONS's communication with users

2.3 ONS engages with a wide range of trade statistics users and stakeholders through monthly meetings. Users told us that there is a strong network among users of trade statistics. ONS also engages with a wider audience through its monthly Economic Forum. Users felt that the level and frequency of engagement with the trade team were good. Users told us that there are opportunities to engage with other users of trade statistics and that the team is usually responsive to queries. A key user also felt that the team at ONS is generally transparent about upcoming changes to the statistics and notifies them early if the decision will impact them.

2.4 However, when users' needs cannot be met, ONS should be transparent about and communicate why (for example, tight resources or a lack of suitable data) and any constraints. Users told us it was not always clear why their views or comments were not taken onboard.

2.5 A key issue that users raised with us is the lack of a comparable back series update following the structural break in data from 2021 as a result of HMRC data collection changes after the UK's exit from the European Union (EU). ONS published articles analysing the impact of the data collection changes on the statistics. These articles were clear, useful and consolidated key information, and explained why ONS decided against making any adjustments to account for the discontinuity. Many users expressed disappointment that a back series wasn't released as they would like to be able to make comparisons of trade with the EU before and after the UK's exit. ONS understands this is a problem for users and discussed it with users at the monthly trade data strategy meeting and at wider meetings with users. ONS explained that the reason the back series could not be adjusted was due to a lack of available data to be able to make any adjustments. As a result, ONS concluded that any adjustment would not have been sufficient quality.

2.6 In the monthly bulletin, ONS provides additional insights around the statistics and has produced ad hoc analysis in response to external events. In our analysis, we found that the release covers information about drivers, similar to comparable economic statistics releases such as the monthly GDP statistics. Additionally, ONS has published a series of articles about specific trade topics, for example on Russia following the war in Ukraine, to help users understand how global events impact UK trading patterns. ONS also publishes an annual trade year in review article, doing a deep dive into particular commodity drivers across the year, taking into account commodities which users have expressed an interest in. Recently, ONS published an article analysing the specifics of the UK's trade relations with the US and clearly explaining the reasons for the trade asymmetry, in response to media and policy interest in trade with the US in early 2025. We commend ONS's proactive response to the interest in trade earlier this year. However, some users told us that they would welcome additional analysis in the bulletin. We encourage ONS to work with users to understand any gaps in the bulletin and, if possible, address them.

2.7 Users would benefit from a clear overview of the different datasets and how to navigate known limitations such as trade asymmetries. For example, ONS could publish a user guide that pulls together relevant information for users.

2.8 In the last year, three corrections have been made to the bulletins (covering data from December 2023, May 2024 and August 2024), and ONS uses the appropriate box at the top of the bulletin to notify users of any corrections. Each of the corrections was a very simple error: mixing up "exports" and "imports" within the commentary, slight errors in the numbers, and failing to upload the new dataset for one of the tables. Although small, mistakes such as these could be prevented in future releases by improved quality assurance and sign-off processes, as they appear to be mostly the result of human error. More recently, ONS discovered an issue with the HMRC trade in goods data and an error in the trade in services data in March 2025, which delayed the publication of January 2025 data. ONS has kept users up to date, investigated the errors and provided users with preliminary indicative estimates of the impact of the errors. In the March 2025 publication, they published the revised estimates to account for the errors in line with the National Accounts Revisions Policy.

2.9 A key user raised that they have repeatedly asked ONS to let them know if they find an error or make any changes to the dataset. The user feeds the trade datasets into a reproducible analytical pipeline to produce their own datasets and this pipeline does not work if a minor thing has been changed in the dataset. The trade team informed us that it has introduced a new process to let key users know about errors as soon as they are found. ONS should assess the effectiveness of this process by engaging with the relevant key users.

## Revisions to the trade in services estimates

2.10 A key area of concern for users is the revisions to the monthly trade in services estimates. To meet user needs, ONS added trade in services to the monthly publication, whereas before they were published in the quarterly release. Revisions are an expected part of producing statistics, especially when the underlying data are survey-based, but users told us that they are especially notable in the trade in services data.

2.11 It is helpful that throughout the bulletin ONS refers to the trade in services figures as "early estimates" to indicate their volatility, but ONS should consider improving the information available on the uncertainty of the data.

2.12 It is good that ONS already publishes revisions triangles for the total trade balance, imports and exports. Users told us that they consider the trade in goods data to be very reliable. ONS should consider publishing revisions analysis for trade in services separately because users recognise that these are subject to large revisions. Doing so would help reassure users that ONS is aware of the size of the revisions. In our analysis, we found that the revisions made to the trade in services estimates are large, with the mean absolute revision (MAR) for imports being £695 million and £799 million for exports after one month (£536 million for the total trade balance). In terms of the relative mean absolute revision (RMAR), this was 3.4% for imports and 2.4% for exports after one month (4.3% for the total trade balance). Additionally, it appears that there is an upwards bias in the revisions. See Annex 2 for details on our revisions analysis.

2.13 Users told us that the revisions mean that they need to use large caveats with the monthly trade in services data as the revision is likely to be large and could 'change the story' the month after if the revision is in the opposite direction. As a result, the monthly estimates are difficult to use and have limited value to users, and some users have had to refer instead to the quarterly releases. Users also feel this issue has worsened and wonder about any potential upwards bias in the revisions and if this could be addressed. ONS should reassure users about these revisions. In addition to conducting analysis of the revisions, more information on how the estimate is modelled and how much of it is based on other existing data would help users understand the reliability of the estimate.

**Requirement 1**: Substantial revisions and potential bias in the revisions reduce the usefulness of the monthly trade in services estimates for key users. To help the statistics better meet user needs, ONS should:

a) provide more information and analysis in the bulletin on the uncertainty of the estimates to reassure users and aid the interpretation of the estimates.

b) contextualise the revisions relative to the size of change in the trade balance and with reference to earlier periods of economic turning points and volatile growth.

c) publish separate revisions triangles for trade in services.

d) investigate the extent of any bias and, if deemed necessary, publish a plan that sets out how it intends to address the bias. ONS should share the analysis with users.

## Trade asymmetries

2.14 ONS has done crucial development work around the asymmetries in trade data since our previous assessment. Trade asymmetries are the differences between the published trade data of a given country and the data of its partner countries. Each country collects its own data on imports and exports. In theory, each country's exports to another country should match the other country's imports from them, and vice versa. In reality, figures often do not match exactly. These asymmetries are especially pronounced in trade in services data. Previously, users had concerns that the UK had significantly higher asymmetries when compared to other countries.

2.15 ONS has made significant progress to understand and begin quantifying the factors and causes of the UK's bilateral trade asymmetries. Between 2018 and 2020, it published articles on asymmetries in trade data that cover analysis on trade in services asymmetries and explain some of the potential causes of the asymmetries, showing comparisons and the relative strengths of different estimates. More recently, in 2022, ONS published an article focused on the challenges of measuring trade asymmetries. ONS has also done work internationally to improve its understanding of this topic and proposed the creation of an informal Expert Group on International Trade in Services Asymmetries in the Organisation for Economic Co-operation and Development (OECD) Working Party on International Trade in Goods and Services Statistics. ONS was influential in the group being set up and chaired it for multiple years.

2.16 In February 2021, the Economic Statistics Centre of Excellence published the paper Using a model to understand more about UK trade in services asymmetries. This paper uses a methodology developed by the OECD and the World Trade Organisation to produce a reconciled asymmetry dataset for UK trade in services. The resulting dataset confirmed that the most challenging measurement issue for UK trade statistics lies in recording trade in services imports.

2.17 Therefore, improving the quality of trade in services estimates is an important part of minimising trade asymmetries where possible. Since our previous assessment, ONS has expanded the International Trade in Services (ITIS) sample to include microbusinesses (with 0–9 employees), which is the key data source for trade in services. The survey sample has also been re-designed to enable a better understanding of the service trade activity of small UK businesses. This will help to improve the quality of estimates of trade in services, particularly estimates of imports. The methods changes for the 2020 ITIS were detailed in an ONS article in 2022. Once the impact of the sample improvement can be seen in the data, ONS should consider publishing an up-to-date impact analysis.

2.18 When we spoke to users, none expressed significant concerns about trade asymmetries. Users would like to see a document that brings together all the information and work that ONS has done on asymmetries and how it should be used to interpret the statistics. It would be good to see ONS publish such a document and continue working internationally to increase understanding and minimise the asymmetries.

**Requirement 2**: To ensure that users have all the necessary information to appropriately interpret the UK trade statistics, ONS should synthesise its previous analytical work on trade asymmetries. This should include the work ONS is doing to minimise these asymmetries and how these trade asymmetries impact on use of the data.

## Updating quality and methods information

2.19 Following our previous assessment, ONS published multiple trade development plans that set out its approach to improving the trade statistics, including an assessment of the quality of the trade statistics, a strategy for user engagement, and documentation of system capability and risk mitigation. The most recent development plan was published in 2022.

2.20 Since 2015, ONS has redeveloped its website and significantly improved its monthly publication, which now provides a useful overview of headlines for both trade in goods and trade in services. The accessibility was also greatly improved, and ONS should continue its work to maximise accessibility for users. The monthly bulletin provides relevant links to related data, bespoke articles and other important information. The publication has engaging interactive graphs that allow users to explore the data.

2.21 As well as improving its methods and quality assurance process, ONS also updated the information about methods, clearly covering the specifics set out in the requirements from our previous assessment, such as presenting the overall framework for the trade statistics, information on strengths and weaknesses, and details about the different data sources. It is good to see that ONS has become more transparent.

2.22 It was positive to hear that users generally understood the methodology used to produce the monthly trade data and felt it is well established. Users also appreciated ONS offering training to their staff to explain their methods. The publication of articles that detail changes to methods, such as the series covering the impact of trade in goods data collection changes on UK trade statistics following the UK's exit from the EU, is a great example of ONS providing additional information when helpful for users. Some users mentioned that they would like more details on how the trade in goods data from HM Revenue and Customs (HMRC) are transformed to be on a balance of payment basis for the ONS trade publication and the associated quality assurance process.

2.23 However, the two documents covering methods, the Quality and Methodology Information (QMI) report and methodology document, should be updated to reflect the current state of affairs. The QMI was last updated in May 2021 and the methodology document in March 2017. The QMI and methodology document should provide up-to-date information on users and user engagement, updates to ITIS, and more information about how HMRC data are transformed. It is especially crucial that the QMI reflects the changes to the methods, processes and data collection of trade in goods data as a result of the UK's exit from the EU. Additionally, ONS should ensure that the difference between the two documents is clear and that the two documents reference each other appropriately. Alternatively, ONS should consider whether two separate documents are needed and if it might be clearer for users to only have one document that covers everything related to quality and methods.

**Requirement 3**: To improve users' understanding of the quality of the UK trade statistics and the methods used to produce them, ONS should:

a) update the Quality and Methodology Information report and the methodology document and ensure these are updated regularly.

b) consider keeping only one document that covers quality and methods or improve the signposting to both existing documents, being clear to users on the difference.

## Resource, business continuity, and capability in the trade team

2.24 During the review, ONS has told us that the trade team has experienced issues with resourcing and knowledge retention. Since the development work after the UK's exit from the EU, the trade statistics development project has been de-prioritised and was shut down two years ago. As a result, the trade team has received less support.

2.25 The trade team has also experienced high staff turnover, which has meant a loss of significant subject matter expertise. Subsequently, the slow nature of the recruitment process has meant that the vacancies have remained unfilled for extended periods of time, leaving a smaller team to handle the business as usual of the monthly publication. It is important that the trade team is appropriately resourced and has the necessary expertise to meet the requirements of the Code of Practice.

2.26 Additionally, the trade team told us that the legacy system used to process trade in services data is inefficient, difficult to work with and no longer fit for purpose, this puts strain on the limited resource and restricts capacity for continuous improvement. The team has already taken steps to progress work on moving away from the legacy system and is developing requirements for a new system. As part of a deep dive into their systems, quality assurance checks of the trade in services data highlighted an error in the annual processing system. This error, alongside a separate error in the trade in goods data received from HMRC, meant the publication of the January 2025 data was delayed. It was published two weeks later on the same day as the Quarterly National Accounts and the Balance of Payments, where all corrected data could be brought through in line with the National Accounts revisions policy. Together with ensuring appropriate resource, a better processing system is needed to prevent future errors and improve the efficiency of the team.

**Requirement 4**: To ensure quality, reliability and efficiency in production, that will also enable ONS staff to carry out both production and continuous improvement, ONS should:

a) review the resources available to deliver the UK trade statistics, including identifying and mitigating the risks of single points of failure.

b) review its knowledge transfer process and support business continuity during staff changes.

c) improve and introduce efficiencies in its production processes.

d) review its current processing system to understand and reduce the level of risk of errors.

e) publish a delivery plan with milestones for implementing a more effective and efficient processing system.

# List of requirements

Based on the findings of this report, we have identified four requirements that ONS must fulfil:

**Requirement 1**: Substantial revisions and potential bias in the revisions reduce the usefulness of the monthly trade in services estimates for key users. To help the statistics better meet user needs, ONS should:

a) provide more information and analysis in the bulletin on the uncertainty of the estimates to reassure users and aid the interpretation of the estimates.

b) contextualise the revisions relative to the size of change in the trade balance and with reference to earlier periods of economic turning points and volatile growth.

c) publish separate revisions triangles for trade in services.

d) investigate the extent of any bias and, if deemed necessary, publish a plan that sets out how it intends to address the bias. ONS should share the analysis with users.

**Requirement 2**: To ensure that users have all the necessary information to appropriately interpret the UK trade statistics, ONS should synthesise its previous analytical work on trade asymmetries. This should include the work ONS is doing to minimise these asymmetries and how these trade asymmetries impact on use of the data.

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c) improve and introduce efficiencies in its production processes.

d) review its current processing system to understand and reduce the level of risk of errors.

e) publish a delivery plan with milestones for implementing a more effective and efficient processing system.

We expect ONS to meet these requirements in six months.

# Annex 1: Actions that ONS has taken in response to the 2015 assessment report requirements

| Requirement | Actions taken by ONS to meet the requirement | OSR's evaluation of the evidence |
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| **Requirement 1**<br>ONS should:<br>a. Build on its improving engagement with users to develop a thorough understanding of the range of potential uses of UK Trade statistics and publish information about the types of decisions that they inform<br>b. Publish details of its user engagement strategy and outline how it will continue to strengthen its ongoing dialogue with users of UK Trade statistics, and improve its response to ad hoc queries<br>c. Publish the information that it has gathered about users' experiences of its UK Trade statistics and explain how it is responding to what it has learned | In response to this assessment, ONS published a 2016 trade development plan and a 2017 trade development plan, which set out ONS's approach to engaging with users of UK trade statistics. ONS has published an account of users and usage of trade statistics. This followed the results of the UK Trade Survey in 2015.<br><br>In its 2017 plan, ONS detailed how user input from a 2016 workshop, user group meetings and bilateral discussions continued to be used to prioritise its development work (quality assurance of data and improving the transparency of production systems).<br><br>ONS published detail on the users and uses of trade statistics in its development plans: 2020 trade development plan and UK trade and investment development plans update: achievements and forward look: October 2022. The 2022 document states that the update aims to give users a better understanding of achievements to date and upcoming work. It is also stated that ONS welcomes feedback. | Requirement met.<br><br>Over the last several years, ONS has significantly improved its stakeholder engagement. ONS increased transparency around its approach to user engagement and considered users' input to develop its trade statistics publications and discuss future developments. It has also provided information on recent engagement activities.<br><br>The development plans that ONS published all included sections on user engagement.<br><br>Updates provided to OSR and the Regulation Committee focused on how ONS has included users in the development work. Users told that OSR they are happy with the level and frequency of engagement from ONS.<br><br>ONS should ensure that when updating the methods documents, it also pays attention to the user section, including information on how users have informed decisions. |

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| | ONS engages with its key users of the Bank of England, HM Treasury, the Department for Business and Trade and HM Revenue and Customs (HMRC) in quarterly user group meetings and on an ad hoc basis.<br><br>ONS has engaged more widely with users of National Accounts data through the Quarterly Review of Accounts Stakeholder Group and through its Economic Forum.<br><br>Furthermore, in the run up to the EU exit, ONS increased its engagement activities further, establishing a quarterly trade group for expert users and meeting with this group's members individually to discuss data and provide analytical support on trade related issues.<br><br>A recent update on ONS theme-based user engagement (July 2024) includes trade as a key theme. | |
| **Requirement 2**<br>ONS should:<br>Publish coherent, detailed accessible information about the methods used to produce *UK Trade* and *UK Trade in Goods by CPA*, including:<br>a. Presenting the overall framework for UK Trade statistics, and the contribution of international trade to the UK economy | ONS's updated monthly UK trade statistical bulletins provide users with increased detail on the level of trade in goods by country and product and helpful information on the dynamics of the trade account to assist users' interpretation.<br><br>The UK Trade methodology document linked from the monthly statistics provides a detailed description and links to the use of these statistics in the Pink Book and the National Accounts (Section 3), including | ONS updated its methods and quality information in its QMI, most recently in May 2021. This document should be reviewed more regularly to reflect the most up-to-date state of affairs (for example, the changes to the International Trade in Services (ITIS) survey). There could be more clarity on the difference between the UK Trade methodology document and the UK Trade QMI report, as both are still linked in the bulletin. Alternatively, ONS should consider if having one document would be clearer for users. |

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| b. Explaining how *UK trade* is used in producing Balance of Payments and UK National Accounts; and outlining any reservations or derogations in relation to International Regulations<br>c. Explaining how the monthly estimates are produced from monthly, quarterly and annual sources and how estimates by country and product are compiled, including the rationale for choices<br>We suggest that in meeting this Requirement, ONS does not seek to replicate existing methods information presented by itself, HMRC and others, but improves the signposting to that information and sets it within the context of monthly UK Trade statistics | reference to the difference in National Accounts and HMRC measurement of UK trade. The same note covers the construction of monthly estimates from varying sources and the different measures.<br><br>There is also the Quality Methodology and Information (QMI) document, which provides more up-to-date information and detail on the Blue Book and Pink Book (National Accounts).<br><br>ONS has also published articles on the effects of the EU exit on data collection in 2023 regarding import estimates and in 2024 regarding the structural break from 2021 due to a change in data collection. | We welcome the publication of articles on trade-related issues, such as the recent article analysing the UK's trade relationship with the USA.<br>It is good to see that the ONS has published extensive information on the effects of the EU exit on trade in goods.<br><br>When updating the QMI, ONS should consider providing more information on how HMRC trade in goods data are transformed. |
| **Requirement 3**<br>ONS should:<br>Publish information about the quality of the UK Trade statistics that:<br>a. Explains the strengths and limitations of the statistics in relation to uses<br>b. Describes potential sources of error and bias and how it mitigates for them, including investigating and | ONS's UK Trade QMI describes the strengths and weaknesses of UK trade data and covers statistical issues such as sample and non-sample bias and trade asymmetries (further details on these data are discussed in Requirement 6). There are links to relevant HMRC webpages, and clear reference is made to the European Statistical System's five dimensions of quality. | ONS has been clear in its presentation of the strengths and limitations of these data, including in its guidance on the interpretation and treatment of monthly estimates and the status of contributing data sources, such as data arising from the International Passenger Survey, which was affected by changes in data collection techniques during the COVID-19 pandemic.<br>ONS has improved its referencing to other statistical producers working on trade. |

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| explaining the different sources of volatility in the monthly estimates<br>c. Presents appropriate measures of quality<br>d. Presents information around all the dimensions of the European Statistical Systems definition of quality<br>Appropriately references relevant quality information published by other statistical producers – for example HMRC and ONS for trade in goods and trade in services and Eurostat Quality Statements | The International Trade in Services QMI was published in January 2022 and reviewed in October 2024. The QMI documents and other documentation covering related statistics are consistent.<br><br>Caveats about data are noted in the QMI. | However, the QMI should be updated and contain appropriate discussion of the impact of the EU exit and reference relevant articles that discuss the issue in-depth. ONS should also present more information on the uncertainty and revisions of the trade in services estimates so that users understand the limitations when using these estimates. |
| **Requirement 4**<br>ONS should:<br>Publish information about its strengthened quality assurance arrangements including its assurance arrangements for administrative data and survey sources used to produce *UK Trade*, taking into consideration the Authority's *Administrative Data Quality Assurance Toolkit.*<br>ONS should:<br>a. Present a comprehensive up-to-date picture of sources and how they are used in the production of UK trade estimates, including an indication of their | In February 2017, ONS published, in line with OSR's Quality Assurance of Administrative Data (QAAD) Toolkit, an article entitled Quality Assurance of Administrative Data used in Trade Statistics, addressing the detail of Requirement 4.<br><br>These data quality improvements have been integrated into a new trade statistics production system, which is discussed in further detail in Requirement 7.<br><br>As part of its 2018 UK trade statistics transformation article, ONS published detail on its increased collaboration with HMRC, which sought to ensure greater quality assurance and detail around estimates of trade in goods (Section 2). | Requirement met.<br><br>ONS made significant efforts first to improve and develop relationships with data suppliers and subsequently to apply OSR's QAAD framework to the many sources of statistics that make up the inputs to trade estimates. Importantly, ONS encouraged upstream data suppliers, including HMRC, to implement the framework for trade in goods data.<br><br>Considering the errors that ONS found in HMRC data in January 2025, ONS should consider whether any changes to procedures and communications are required to reduce the risk of future errors. |

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| relative contribution to the final estimates<br>b. Outline the operational context of the sources in plain language, and what checks are carried out by the data providers in relation to those sources<br>c. Publish information about the data flows, highlighting the points of risk and how it mitigates for those risks, including information about risks in its processing systems and highlighting its own quality assurance checks<br>d. Explain how it assures itself of the quality of information provided from the different sources; including any formal agreements and data supplier engagement<br>e. Explain how it has learned lessons and strengthened its own quality assurance checks and in particular its sense-checking of the statistics following the errors identified by users in 2014<br>Detail its judgement about the quality of the statistics, and the rationale for this judgement, taking account of what it has learned from reviewing its quality assurance arrangements | | |

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| **Requirement 5**<br>ONS should:<br>Publish a short summary paper that: explains its current assessment of the quality of statistics on UK trade in services in respect of meeting user needs; outlines its strategy and broad timeline for identifying and addressing weaknesses in the statistics; and explains how it will measure success in meeting user needs – ONS should submit this paper alongside the current National Statistics Quality Review | ONS published the details of its strategy for addressing trade in services data in its 2020 trade development plan. This includes detail on how the ITIS (the main data source for trade in services) has been and will be improved.<br><br>Details on standard errors arising from the ITIS survey were included in the International trade in services, UK: 2016 publication on 31 January 2018. Cumulative impacts (including the doubling of the ITIS sample) on trade balances and the Blue Book were covered in the UK trade data impact assessment from new developments article (2018). A further article on the impact of Blue Book developments on UK trade data was published in 2019, and the most recent publication of ITIS in 2020 also contains a table with standard errors.<br><br>ONS then published a follow up on its strategy and development plans in October 2022, which discusses the improvements made to trade in services data since 2020.<br><br>A detailed overview of the methods changes to ITIS 2020 was published in the article International trade in services, overview of methods changes: 2020 (2022).<br><br>Most recently, the ITIS QMI was updated in 2024. | Requirement met.<br><br>The 2020 and 2022 development plans clearly set out the plan and mention quality in most sections of the reports. The separate article from 2022 has a clear overview of all the changes made to the ITIS.<br><br>ONS recognised and directly addressed users' concerns and requests for greater levels of detail on the quality of trade in services data and in 2016 doubled the size of the ITIS survey sample from 1,100 to 2,250 businesses per quarter. OSR welcomes the increase in sample size, which, as well as increasing the accuracy of headline estimates, also enabled further breakdowns to be produced. The detail on service activities has also increased. This development is an important step in reducing asymmetries.<br><br>Some users told OSR that the size of the revisions makes it hard to use the monthly trade in services estimates. ONS should work to improve its communication of uncertainty of the estimates to users and look into adjusting for any potential bias in the revisions. |

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| **Requirement 6**<br>ONS should:<br>Increase its awareness of the statistics published by other countries in relation to trade with the UK, and use this information to sense-check the UK Trade statistics | ONS has published multiple articles on trade asymmetries:<br>• A UK Perspective, 2017<br>• Diving deeper into UK bilateral trade data, 2018<br>• Extending analysis of UK bilateral trade data, 2018<br>• Asymmetries in trade data: updating analysis of UK bilateral trade data, 2020<br>• Trade in services asymmetries – the challenges of measuring imports and exports, 2022<br><br>ONS also commissioned an academic at Harvard University to examine bias in UK trade flow estimates. In February 2021, the Economic Statistics Centre of Excellence published the paper Using a model to understand more about UK trade in services asymmetries. This paper uses a methodology developed by the Organisation for Economic Co-operation and Development (OECD) and the World Trade Organisation to produce a reconciled asymmetry dataset for UK trade in services.<br><br>ONS set out its asymmetries strategy, aiming to:<br>• understand the largest trade in services import asymmetries | ONS has made significant progress in investigating trade asymmetries, and it has been able to quantify a significant amount of the trade in services asymmetries. We are encouraged by the international effort to advance this work, in which ONS plays a leading role.<br><br>As part of the strategic aim to reduce imports asymmetries in trade in services, it is good to see that ONS has widened coverage of enterprises in its ITIS survey to those employing between 0 and 9 people.<br><br>ONS should progress its plans to synthesise all the work it has done on asymmetries, for example in a user guide, to provide a comprehensive overview for users about how to navigate asymmetries when interpreting the trade estimates. |

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| | <ul><li>drive improvements that lead to a reduction in trade in services import asymmetries</li><li>embed asymmetries considerations</li><li>lead international engagement with priority bilateral partners and OECD</li><li>improve asymmetries modelling</li></ul><br>The monthly bulletin, QMI and methodology also contain information about asymmetries and reference the HMRC's work on trade in goods asymmetries.<br><br>The ITIS QMI says that for the 2020 collection onwards, the ITIS sample was expanded to include microbusinesses (those with an employment count below 10). Data from microbusinesses are not yet included in official trade in services statistics, but an analysis of the impact of this change on balanced gross domestic product (GDP) estimates is expected to be published in autumn 2025. | |
| **Requirement 7**<br>ONS should:<br>a. Review and document the weaknesses in its processing system capability, within the context of documented user needs, and set out its plan for addressing those weaknesses<br>b. As part of the information that it publishes about its quality | ONS's 2017 trade development plan, Quality Assurance of Administrative Data used in Trade Statistics (2017) report, article on UK trade statistics transformation (2018) and UK trade and investment development plans update: achievements and forward look (2022) document the developments in system capability and the mitigation of known historical production risks. | Requirement met.<br><br>ONS's approach to addressing the pattern of errors, many of which were found by users and led to the de-accreditation of these statistics, was robust. ONS's first efforts were centred around existing production systems, which were limited in their ability to allow effective quality assurance or the speedy investigation of errors. The new |

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| assurance arrangements, explain for users how it mitigates known system risks and ensures sufficient time for assurance and sense-checking activities. | ONS rebuilt its trade statistics production systems to transform and streamline the production of trade in goods and trade in services statistics**.** The new strategic platform is flexible, transparent and efficient, facilitating improved quality assurance and analysis.<br><br>The new systems are now used in the monthly, quarterly and annual production of trade and economic statistics, are more efficient and provide more transparent production and automated quality assurance processes.<br><br>The systems also allow early identification of missing data or anomalous values through automated quality assurance consistency and reliability data checks. Processing data through a strategic platform has increased the speed of processing significantly, creating added time for quality assurance and the application of analytical capability in the processing round. | system has mitigated many of the known historical system risks, whilst providing users with increased detail on trade in goods and services.<br><br>The published reports cover this requirement very well. The QAAD report provides a detailed and comprehensive quality assurance process. It is good to see that ONS has clearly continued to consider systems and QA processes in its development work.<br><br>However, some errors still occurred in the past year. For example, ONS discovered an error in the trade in services data during their QA in March 2025. This error was a result of issues with the legacy processing system. ONS should continue to monitor its systems and QA processes to reduce the chances of errors occurring. |
| **Requirement 8**<br>ONS should:<br>Publish a development programme for UK Trade statistics that:<br>a. Sets out the priority projects, including the rationale for those priorities, a broad timeline, and an assessment of their likely impact<br>b. Is appropriately resourced | ONS published five iterations of its development plan, commencing in 2016:<br>• 2016 trade development plan<br>• 2017 trade development plan<br>• 2018 UK trade statistics transformation<br>• 2020 trade development plan<br>• 2022 development plans update<br>These plans set out the priorities, timelines, progress and plans of the trade development programme. | Requirement met.<br><br>Since our previous assessment, ONS has embarked on a substantial effort to create a development programme that has continued over the past 9 years.<br><br>ONS's plans include working with international partners to triangulate UK data and building |

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| c. Explains how it will keep users regularly updated on progress | | relationships to focus on issues such as trade asymmetries.<br><br>ONS should consider providing an update to cover the ongoing future development plans outlined in the 2022 update. ONS should ensure that it continues to have the appropriate resource and expertise to further its development work. |
| **Requirement 9**<br>ONS should:<br>Improve the commentary in *UK Trade* and supporting analytical pieces so that it aids users' interpretation of the statistics by:<br>a. Presenting a clear narrative about UK Trade, with a balanced representation of trade in both goods and services, including considering how it can present more detail about trade in services<br>b. Presenting prominent information about uncertainty around the estimates and cautioning users appropriately about focusing on latest monthly estimates<br>c. Providing plain language descriptions and contextual information about *UK Trade*<br>d. Presenting a narrative that helps users to draw meaningful conclusions from the analysis presented, including presenting | ONS has developed its monthly trade bulletin, providing a robust narrative for UK trade, including easy access to trade in services publications and guidance on the strengths and weaknesses of the data and interpretation of volatile monthly data.<br><br>The bulletin covers the following elements set out in the requirements:<br><br>• a narrative including goods and services<br>• caution around the uncertainty of the monthly estimates<br>• a helpful glossary explaining technical terms in plain language<br>• relevant contextual information, including quarterly trends, to set the results within a longer time series<br>• links to related content, such as articles published by ONS on trade, information about the balance of payments, and HMRC webpages<br><br>Included in the monthly bulletin [UK trade: December 2024] are links to | ONS has put a lot of work into overhauling the contents of the UK trade statistical bulletin, which now better reflects the importance of trade in services in total UK trade. ONS has enhanced the commentary to bring together a narrative for trade and short-term economic indicators.<br><br>Some users would like to see more information about what is driving changes in the estimates in the monthly bulletin. ONS should consider working with users to identify any gaps and see if it can meet user needs.<br><br>ONS should also consider if it could do more work on presenting the uncertainty of the monthly trade in services estimates, which are subject to large revisions. |

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| the latest statistics within the context of a longer time series<br>e. Setting *UK Trade* against the range of trade and balance of payments statistics published by the ONS and other organisations, including presenting international comparisons and more prominent information about why ONS and HMRC trade in goods statistics differ<br><br>As part of meeting this requirement ONS should:<br>a. Consider, in consultation with users, whether it would aid interpretation, and represent a better use of resources, to include information about trade in goods by activity within *UK Trade,* rather than as a separate National Statistics output. ONS might also helpfully consider the relationship of *UK Trade* with *International Trade in Services*<br>b. Work with colleagues producing *Balance of Payments* and *International Trade in Services* and with HMRC to provide helpful explanatory information to support the coherent presentation and wider | bespoke articles, for example on the structural break from 2021.<br><br>ONS no longer publishes trade in goods by activity as a separate publication but instead provides a link to the relevant dataset in the bulletin.<br>Additional information on the differences with the HMRC data as well as on the balance of payment statistics and the Pink Book is provided in the QMI. | |

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| use of the portfolio of official statistics about UK trade<br>Consider the points detailed in annex 1 and annex 2 | | |
| **Requirement 10**<br>ONS should:<br>Improve the accessibility of *UK Trade* and *UK Trade in Goods by CPA* through ONS's website by:<br>a. Signposting clearly to users how the statistical reports relate to each other and to other trade and economic statistics<br>b. Providing users with clear information about what data on UK trade in goods and services is available, where and when, including data published as part of other ONS statistical releases or by other organisations such as HMRC<br>c. Ensuring that data that ONS releases on its website as a result of ad hoc requests is clearly labelled and easy for users of *UK Trade* to find, and considering if any of this data could be published as standard as part of the statistical reports<br>Using consistent and clear labelling and numbering of tables within the statistical report and in Excel | The information on all aspects of trade in the monthly bulletin UK trade: December 2024 is clear and easy to find.<br><br>The accessibility of information on trade-related issues has been improved through the coverage of all aspects of trade in the revised UK trade bulletin. Links have been provided to detailed goods and services data and wider trade issues and topics relevant to the trading environment (for example, the EU exit).<br><br>The ONS website has a specific search function for ad hoc publications, which makes it easy to search for trade-related ad hoc data.<br><br>All trade datasets have a clear and consistent cover page in Excel. | Requirement met.<br><br>Since the previous assessment in 2015, ONS has redeveloped its website, making significant efforts to improve the accessibility of trade statistics. It is good to see that all relevant datasets and documents are now easily accessible directly from the monthly bulletin.<br><br>ONS should inform users of any changes to the labelling in the datasets in Excel so that users can adjust their processes, which might rely on specific labels.<br><br>ONS should inform users about how the bulletin might change as a result of the new ONS website. |

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| **Requirement 11**<br>ONS should:<br>Publish and maintain a rolling twelve-month timetable of *UK Trade* and *UK Trade in Goods* by CPA release dates | ONS includes dates of UK trade as part of its release calendar. | Requirement met.<br><br>ONS introduced a rolling programme of updating the release calendar soon after the publication of Assessment Report 304 in 2015. |
| **Requirement 12**<br>ONS should:<br>Review the list of those with pre-release access, with a view to minimising the numbers of individuals included, and inform the Statistics Authority of the justification for each inclusion | As of 1 July 2017, pre-release access to ONS statistics was removed in all but exceptional circumstances. | This requirement is no longer applicable as ONS withdrew pre-release access to all its statistics in July 2017. |
| **Requirement 13**<br>ONS should:<br>Update its *Statement of Administrative Sources* to clearly and accurately list all of the administrative data sources used to produce its UK Trade Statistics | ONS updated its Statement of Administrative Sources in 2016. | Requirement met.<br><br>ONS updated the Statement of Administrative Sources soon after the assessment, which covers the requirement. |

# Annex 2: Revisions analysis of trade in services estimates

A2.1 To support our evidence for Requirement 1 in this report, we conducted revisions analysis on the trade in services estimates. Analysis was done on the monthly trade in services data (current prices) from the monthly bulletins published between March 2022 and February 2025 (covering data from January 2022 to December 2024). We looked at revisions to the total trade in services balance, the exports and the imports. We calculated the mean revision (MR), mean absolute revision (MAR) and the relative mean absolute revision (RMAR). Analysis was done after 1 month (T+1), 6 months (T+6), 1 year (T+12), 18 months (T+18) and 2 years (T+24).

Table 1. Revisions analysis results of the trade in services balance (£ million).

| Period | MR | MAR | RMAR |
|---|---|---|---|
| T+1 | 55 | 536 | 4.3% |
| T+6 | 674 | 905 | 7.5% |
| T+12 | 721 | 1050 | 8.8% |
| T+18 | 952 | 1287 | 10.6% |
| T+24 | 869 | 1366 | 11.2% |

Table 2. Revisions analysis results of the trade in services exports (£ million).

| Period | MR | MAR | RMAR |
|---|---|---|---|
| T+1 | 320 | 799 | 2.4% |
| T+6 | 2379 | 2503 | 8.0% |
| T+12 | 3479 | 3681 | 11.9% |
| T+18 | 4411 | 4411 | 14.7% |
| T+24 | 5042 | 5042 | 17.5% |

Table 3. Revisions analysis results of the trade in services imports (£ million).

| Period | MR | MAR | RMAR |
|---|---|---|---|
| T+1 | 265 | 695 | 3.4% |
| T+6 | 1706 | 2317 | 12.0% |
| T+12 | 2759 | 3460 | 18.7% |
| T+18 | 3459 | 3554 | 20.8% |
| T+24 | 4173 | 4173 | 25.8% |