

Assessment of compliance with the Code of
Practice for Statistics

Northern Ireland Broad Economy Sales and Export Statistics (BESES)

(produced by Northern Ireland Statistics and
Research Agency)

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 which meet the standards are given National Statistics status, indicating that they meet the highest standards of trustworthiness, quality and value. 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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Executive Summary

Why we carried out this assessment

- ES.1 Northern Ireland Statistics and Research Agency (NISRA) asked the Office for Statistics Regulation (OSR) to assess its [Northern Ireland Broad Economy Sales and Export Statistics \(BESES\)](#). In requesting this assessment, the BESES statistics team at NISRA is demonstrating its commitment to produce BESES that meet the standards required of National Statistics and the Code of Practice for Statistics. We have identified two actions for NISRA to address in order to enhance the public value and quality of BESES and to achieve National Statistics status.
- ES.2 Once the BESES statistics team demonstrates that these steps have been undertaken, OSR will recommend that the UK Statistics Authority designate the statistics as National Statistics.

What we found

- ES.3 BESES are an integral part of the suite of trade statistics produced by NISRA. While there are trade statistics prepared for specific analysis for example around EU Exit, BESES are currently the sole pre-eminent source of data on both sales by Northern Ireland (NI) businesses outside the NI domestic market and international trade outside of GB. In the run-up to EU Exit and the introduction of the NI Protocol, users and stakeholders regarded BESES as essential in measuring characteristics of NI's trade. BESES were vital for informing policy makers and commentators in the pre-EU exit period of the potential economic impact of decisions around trade and access to markets.
- ES.4 The BESES statistics team received well-deserved praise for the support it provided to inform important policy decisions and papers around the EU withdrawal. Users attested to the diligence and efficiency of the BESES statistics team. The team has engaged well with a wide range of users of the statistics and collaborated effectively with other data providers. NISRA has improved the presentation of BESES with a wide range of downloadable formats now available for users, including PDF, HTML, Excel demonstration tables and reference tables¹ in ODS². NISRA also publishes slide packs with every publication relating to NI-GB trade and trade more generally, which incorporate data from several sources including BESES and HMRC.
- ES.5 Our assessment identified that users would value more-timely BESES, so we ask NISRA to investigate what further public value could be added by producing sales and exports statistics more quickly and planning developments; accordingly, and updating the statistics landing page and improving the presentation of quality information. We expect NISRA to address the findings of this report by the end of May 2022. The UK Statistics Authority will take advice from OSR, based on

¹ Reference tables usually have lots of rows and columns and are aimed at users who want detailed data. There may be a wide variety of statistics broken down into different categories. They are generally supplied in a spreadsheet document.

² ODS files are open format and allow more than one tab and formatting tools to be used to make the content more usable, accessible and machine readable.

NISRA's progress against the requirements to decide whether the National Statistics designation is merited.

Background

- 1.1 Experimental annual measures of NI businesses' sales to markets outside NI were first published in 2015 (in respect of the years 2011 and 2012). NISRA published BESES in response to the need to improve the measurement of NI's exports beyond that of the manufacturing sector. BESES superseded the statistics from the [Manufacturing Sales and Exports Survey](#) (MSES) which were designated National Statistics. Questions about the trading status of businesses were first introduced into NI's Annual Business Inquiry (NIABI) in 2011, allowing these data to inform annual BESES.
- 1.2 The UK left the European Union (EU) on 31 January 2020. A new relationship with the EU has now begun, which includes the NI Protocol. As a result of the protocol, NI has in effect remained in the EU's single market for goods (England, Scotland and Wales have left the EU's single market for goods). This allows goods to flow to and from NI to the Republic of Ireland and the rest of the EU as they did while the UK was a member of the EU, without customs checks, tariffs, or new paperwork. BESES are the foundation for the trade components of [Northern Ireland's economic accounts](#) which give insight into the structure and inter-industry relationships of the NI economy. BESES answer key questions about the health of the NI economy and the commercial success of businesses in NI and are used in the modelling and planning of the NI economy.
- 1.3 BESES are currently the sole comprehensive source of data on both sales by NI businesses outside the NI domestic market and international trade outside of GB. Users often identify this as a key strength of BESES, filling a significant data gap in relation to NI and GB trading activity. Prior to EU Exit and the NI Protocol, sales from NI to GB were all part of the UK's internal market. With the NI Protocol and NI's unique position of staying inside the EU single market it is vital that external sales to the different markets are measured.
- 1.4 BESES is unique in that it provides an estimate of trade in goods and services between NI and GB. This is particularly valuable in showing the relative importance of non-domestic trading to the NI economy. Other sources of NI trade data include HMRC's [UK regional trade in good statistics](#), which present data on NI's trade in goods with countries outside the UK, but not currently between NI and GB. The absence of statistical data on trade in goods (at product level) between NI and GB is currently a significant gap in official data, particularly given the need to understand the impact of the trade border between NI and GB.
- 1.5 Without BESES, discussions in the run up to the EU exit on the relative importance of trade between NI and GB, and between NI and Republic of Ireland would have been less well-informed. BESES also highlighted the critical importance of cross-border trade for businesses close to the border and they uniquely demonstrated that those businesses with a larger share of exports relative to their share of employment were more likely to be located close to the Republic of Ireland border.

- 1.6 BESES cover exports (sales made outside the UK), external sales (sales made outside NI – to GB and the rest of the world), total sales for goods, total sales for services and imports and purchases. NISRA publishes BESES through three separate statistical reports: Headline results with estimates for NI businesses' [sales to markets both within and outside Northern Ireland](#) (exports and external sales) around 12 months after the reference period to which the statistics relate; further disaggregation of these results into the [value of goods and services sold](#) around 15 months after and the [value of goods and services purchased by NI businesses](#) (imports and external purchases) around 18 months after. NISRA publishes the statistical reports in several formats including HTML, PDF, ODS and Excel documents.
- 1.7 Data to produce BESES are collected through the NI Annual Business Inquiry (NIABI). The NIABI is an integrated survey that provides information on the value of the economic activity that businesses generate and associated expenditure across the main industrial sectors in Northern Ireland. The NIABI surveys about 20% of the eligible business population each year including: all businesses with 50 or more employees; all multi-site businesses with 20-49 employees; all manufacturing businesses with more than five employees; and a representative sample of other smaller businesses. The NIABI and BESES exclude the insurance and re-insurance industries along with public administration and defence plus agriculture, forestry and fishing. Other areas that are not covered are local authority and central government bodies in education and human health and social work activities. Medical and dental practice activities are also excluded from the survey.
- 1.8 The results from the NIABI and the BESES are essentially two outputs from the same survey. This allows users to analyse the BESES variables (sales and exports to broad destinations, turnover by industry sector, exports by industry sector, exports to markets within the rest of the EU and exports to markets outside the EU) in conjunction with the NIABI variables (business turnover, the value of the purchase of goods, materials and services and approximate Gross Value Added at basic prices and purchases). For example, analysts are able to undertake analysis of trade by industrial sectors and business size bands (based on employees or turnover), which has also been linked to the purchases of different types of energy (from the NIABI). All the statistics are produced on an equivalent basis, which removes any issues with mixing multiple sources for analysis. BESES include industry-level trade statistics (for which HMRC provides product-level information), this has been important over recent years as stakeholders have wanted to analyse the impacts on certain industries, that might be affected by EU Exit developments. The HMRC data alone would not facilitate this. BESES additionally provides a measure of imports and purchases from GB to NI which was particularly useful in providing analysis to users in informing EU Exit discussions.

Meeting users' needs

- 1.9 BESES have been essential in supplying detailed data on cross-border trade between both NI and GB and between NI and Republic of Ireland. Since the EU Referendum in 2016 and in the run up to exiting the EU, there has been a high

demand by analysts and policy officials in both UK government and in NI government departments to understand the trading characteristics of NI and GB. BESES have been the key source for meeting this demand.

- 1.10 NISRA statisticians were praised by colleagues in the Department for the Economy and HM Revenue and Customs (HMRC) for the work they undertook and support they gave to inform important policy decisions and papers around the EU withdrawal. The work of the Trade and EU Exit team was acknowledged when it was nominated for the NI Civil Service (NICS) collaboration award (a category in the annual NICS-wide awards) in 2019.
- 1.11 We found NISRA's user engagement wide-ranging and positive, and that NISRA puts users at the heart of developing BESES. Users told us they have frequent check-in emails and take part in annual customer satisfaction surveys. NISRA runs Economy and Labour Market Statistics (ELMS) users' meetings which allow users to give feedback on their needs and perceptions of ELMS surveys and publications. NISRA also runs an annual NISRA-wide customer satisfaction survey which incorporates ELMS.
- 1.12 In addition to the headline figures published in the BESES bulletins on NISRA's website, NISRA has several additional data access agreements (called Ministerial Directions) in place to provide some users with more-detailed or bespoke analysis of the data. The [Statistics of Trade and Employment \(Northern Ireland\) Order 1988](#) allows survey data collected from businesses to be shared with another government department (and some other bodies) under a Ministerial Direction, for the purpose of the exercise by that department of its functions. As part of these agreements, NISRA helpfully provides users with two versions of data tables – one where all the data on organisations are readily accessible and available (for internal use and can be shared only with those named on the data sharing agreement) and another version that is disclosure checked with suppressed cells where appropriate for public sharing.
- 1.13 NISRA's work to inform EU Exit discussions has forged strong working relationships with officials in HMRC and HM Treasury (HMT) – key users of NISRA's trade statistics. NISRA worked closely with both departments to supply data for important projects on the NI Protocol. NISRA shared evidence with us that showed the BESES statistics team received positive feedback for providing data in a timely manner to analysts. To aid accessibility of the HMRC data, NISRA produced an interactive [Trade-in-Goods mapping tool](#) based on annual HMRC data, which allows users to analyse data and export results to Excel. NISRA shared links to this widely, including with the Department for the Economy, Scottish Government, Welsh Government, the Office for National Statistics (ONS) and with members of the NI Statistics Advisory Committee and NI businesses invited to a stakeholder outreach event.
- 1.14 In partnership with Department for the Economy, NISRA has been proactive in developing the Database for Trade and Economic Research (DTER) which provides access for Department for the Economy statisticians to all business survey data. The objective of the database is to facilitate quicker ad hoc analysis by users. The database will allow analysts to link data sets and should improve understanding of

NI trade statistics. At present the database is still in early development and is restricted to a few select individuals, but NISRA plans to open access more widely and we welcome this move.

- 1.15 NISRA told us that the EU Exit team is currently analysing Eurostat [Northern Ireland trade-in-goods data](#) that provide NI-specific trade-in-products data on a monthly basis since January 2021. NISRA has shared tables of this analysis with the Department for Economy for feedback and is developing a dashboard that will be maintained on a monthly basis to make the data accessible to users.
- 1.16 NISRA carried out [a user consultation](#) in June 2021, in which respondents said they used BESES for a variety of purposes, including to inform departmental policy discussions/decision, balance of trade analysis (imports vs exports) and to make international comparisons. Other uses stated by respondents included the analysis of NI-GB trade and for incorporation into other statistical publications alongside other data sources such as Supply and Use Tables.

Resources for the ongoing production and development of BESES

- 1.17 Users praised the diligence of the BESES statistics team to us but highlighted that it was their view that the team was overstretched and under-resourced, with data requests for some users taking longer than expected to fulfil. In NISRA's own user consultation, respondents suggested that BESES would benefit from greater resourcing and staffing levels.
- 1.18 NISRA told us that the time of its BESES statistics team is fully accounted for in meeting the demands of business-as-usual and ad hoc data requests from customers such as Department for the Economy. Accordingly, meeting added future needs, depending on complexity of the predicted development, could (to a degree) be constrained and may require wider available resources to be used flexibly as in the past.
- 1.19 NISRA has improved the efficiency of the data collection of the quarterly business surveys by amalgamating some individual data collection teams into one team. NISRA additionally plans to amalgamate the annual survey data collection teams into one. The intent is to free-up BESES statisticians to focus solely on the production of the statistics, continue to manage quality effectively and further develop the statistics. The BESES statistics team is also working to improve the understanding of the survey across statisticians in the wider teams of economic accounts, EU Exit and NIABI with a view that support could be made available if there is an unexpected absence of a BESES statistician or demand over and above existing requirements.
- 1.20 The BESES publication date is dependent on the NIABI publishing on time as there are several common variables across both datasets and the NIABI publication sets the top-line totals to which BESES is constrained. The BESES statistics team normally has six to eight weeks over the summer months to make any developments. Due to the packed publication schedule and dependence on the NIABI being published on time, there is little scope to make changes outside this small development window. If an unexpected event occurs, then the BESES

statistics team risks losing that vital development time. The BESES statistics team, however, despite being small is highly resourceful. For example, it used an opportunity of a delayed publication due to COVID-19 to undertake development work over the winter of 2020-21.

- 1.21 NISRA has resources outside of the immediate team to develop its outputs. For example, NISRA has made capital funding available for projects to improve systems and processes for its statistics through NISRA Tech Lab. The Tech Lab is a dedicated branch designed to harness innovative technologies and improve processing efficiency, through targeted investment and bringing together skilled personnel.
- 1.22 The BESES statistics team has proven that it can meet the information requests of users, even in times of high workload. However, there is clearly little spare capacity in the immediate team to respond to any surge in demand for statistics, or to develop the statistics, and the BESES statistics team acknowledged our concerns around the future development of BESES and (although not in the scope of this assessment) NISRA's trade statistics more generally, given the limited resources already available to develop the statistics. NISRA also told us it does not currently have the resource (budget or availability of staff) to expand the immediate team. Continuous innovation and improvement to BESES will be an important part of ensuring that they continue to offer the current highly valued insight and good public value beyond the short term. Given the resourcing queries raised by users in response to NISRA's own consultation, and the ongoing potential for increased demand for data associated with NI's trading arrangements following the UK's exit from Europe, it will be important for NISRA to continue to monitor on an ongoing basis the ability, including continuing to flex capacity, to resource production and developments to meet users' needs and serve the public good.

Improved timeliness and alternative data sources

- 1.23 The time between the reference period and publication of BESES headline results is normally just under 12 months, but due to COVID-19, in 2021 the period was nearer 16 months. Much of that time is when the NIABI fieldwork takes place. BESES headline results are published approximately 6 weeks after the closure of the database, and 3 weeks after the NIABI results (which include BESES constraint totals) are published.
- 1.24 Users told us that the time between the reference period and publication was a key impediment to their usefulness, which was also highlighted in NISRA's own [user consultation](#). Users from UK government and trade organisations told OSR that to make informed policy decisions, they need more-timely statistics. NISRA told us the main reason for the timing of the publication release compared to the closure of the data collection phase is that the three BESES publications are produced, and quality assured separately. NISRA plans to discuss timeliness with its user group to gain a deeper understanding about those users who would find more-timely results beneficial and for what purpose, along with the impact that not having them earlier is having on their work.

- 1.25 We commend NISRA for developing parts of the production process to reduce the time it takes to produce ad-hoc queries, for example by testing automated statistical disclosure control procedures. NISRA told us that the current statistical disclosure checking process (ensuring no person or organisation is identifiable from the results of an analysis of survey or administrative data, or in the release of microdata) doesn't impede current publication timetables but does increase response times to queries. Automated disclosure checking has been very successful and NISRA hopes to fully roll-out its use quickly.
- 1.26 In our view, NIABI may not be the most suitable source for providing quicker estimates, but NISRA needs to find a solution that meets users demands for sales and export statistics that can be used for making informed policy decisions. Users told us that they are prepared to accept a trade-off between the accuracy in the estimates for much quicker availability. Taking account of users' feedback, NISRA needs to consider whether alternative approaches to producing BESES, for example publishing early provisional estimates using an earlier cut of NIABI data, or using alternative data sources, could better meet users' needs.
- 1.27 We commend NISRA for starting to look at alternative sources for earlier estimates, for example, Eurostat [Northern Ireland trade in goods data](#), which are produced monthly based on HMRC data. NISRA is pursuing direct access to these HMRC data. Another possible solution to improve timeliness could be via the Integrated Business Survey System (IBSS) which is due for an upgrade in 2023. The IBSS is a data capture IT system used by NISRA to administer business survey questionnaires, store and validate all the business data collected. Research work has started to look at what functionality is required and in time is expected to improve the efficiency and timeliness of the data collection process.

Requirement 1: NISRA needs to establish with users what further public value could be added by producing sales and exports statistics more quickly, and to (a) develop plans to meet those needs, and (b) be transparent about where the needs cannot be met.

Improved product-level data

- 1.28 Some users expressed concerns about some of the granular breakdowns of BESES, particularly in relation to information on those businesses exporting services and those trading internationally. NISRA produces data relating to individual countries in the EU, but due to a relatively small proportion of NI businesses trading internationally, NISRA aggregates results outside the EU up across multiple countries to obtain meaningful results, for example North America rather than the countries making up North America. Publishing individual country data may satisfy more users, but we recognise that NISRA is limited by the need to protect confidentiality for certain sectors which may include only a few businesses.
- 1.29 Users told us that they would welcome more-disaggregated BESES with greater levels of sectoral and geographical detail. Examples of the data gaps users expressed to us include data on types of firms and size of firms published more as standard and to be able to compare the different size distributions of different types of firms. Users would like finer geographical breakdown of the markets, for example

USA rather than North America. NISRA's [development plan](#) for these statistics published in February 2021 highlights the intention to address these user needs by publishing more-detailed breakdowns and says "*Upon completion of this programming project and investigations we will release more granular BESES data as dictated by our disclosure rules*".

- 1.30 Through two-way cooperation between NISRA and HMRC, BESES have helped to improve HMRC's Regional Trade in Goods statistics. Further cooperation between NISRA and HMRC offers further opportunities to triangulate each other's data to further improve all NI trade data.
- 1.31 NISRA is keen to respond positively to its users' needs for better data on NI-GB and NI-Republic of Ireland trade. These users' needs were echoed in written evidence to the House of Commons [Northern Ireland Affairs Committee's](#) Brexit and the NI Protocol Inquiry highlighting the dramatic effect of both the Trade and Cooperation Agreement and the NI Protocol on both UK imports and exports with the EU and a substantial reorientation of trade between the Republic of Ireland and NI as well as trade between NI and GB³.
- 1.32 NISRA worked with ONS, the former Department for Exiting the European Union, Department for the Economy and other departments to develop a trade survey of hauliers in 2019 with a view to improve product-level data for trade between NI and GB. However, haulage companies did not have the information needed to supply robust data. New HMRC data being collected by HMRC on trade between NI and GB are likely to be the best source of official product-level data on trade in goods between NI and GB. NISRA has taken active steps to help NI trade statistics users access contemporary product-level trade data and gain a better understanding of trade flows between NI and GB. NISRA has submitted an application to HMRC to access these data with the hope that they will help strengthen its statistics, particularly the product-level data available in the [NI Supply-Use Tables](#).
- 1.33 We support NISRA's endeavour to share and link for its BESES users to already-existing data to add further insight into NI trade. NISRA has committed, once it has a response from HMRC to its application to access product-level data on NI-GB trade, to advise BESES users quickly on whether they can access product-level NI-GB trade and where and when they can access such data.

Quality of BESES

- 1.34 Users we spoke to as part of this assessment were confident in the quality of BESES and were satisfied that the quality of the statistics was sufficient for their needs. As a sample-based survey, estimates from the NIABI will have some degree of uncertainty and NISRA explains this uncertainty in its external sales statistics. Users told us that they are aware of the limitations of the statistics. NISRA's user consultation highlighted that most respondents said that NISRA's advice around strengths and limitations of the statistics was clear, and the statisticians involved were readily available to answer questions relating to the data as well as any

³ <https://committees.parliament.uk/writtenevidence/37759/pdf/>

limitations or caveats. However, users highlighted that they would appreciate a summary of limitations that can be easily copied and cited.

- 1.35 NISRA has collaborated with the Republic of Ireland's national statistical institute (Central Statistics Office – CSO) in looking into reasons for and possible mitigating measures about trade asymmetries⁴ arising from the trade figures reported by both organisations. This work provided insight into what might be driving significant changes in estimates of trade between NI and the Republic of Ireland. This work has helped to prepare for recent analysis by the CSO into trade between NI and the Republic of Ireland since the implementation of the NI Protocol.
- 1.36 As part of the new rules in the NI Protocol, separately identifiable VAT registrations for NI businesses were introduced from January 2021. This introduction of NI VAT registrations has allowed traders to recognise and report their trade with NI more accurately. Previously it was not always possible to distinguish whether a UK VAT registration related to a trader in GB or NI. Since the start of 2021, CSO has queried with traders when there has been a reportedly large increase in trade between NI and the Republic of Ireland since the start of 2021, in many cases, the increases are explained by changes to supply chains. However, in some cases, traders have reported that they had previously been incorrectly reporting their trading partner as being in GB, when in fact the partner was a trader in NI. CSO has revised its data for a period of two years (2019-2020) to allow more-accurate comparisons of Republic of Ireland's trade with Northern Ireland before and after EU Exit.
- 1.37 Understanding trade asymmetries plays an important part in helping NISRA to understand the quality of its own statistics. The BESES team is better prepared to answer users' queries when it understands the differences between BESES and equivalent statistics from the CSO. We commend the work that NISRA has done with the CSO. The Department for the Economy, the Department for Foreign Affairs and CSO are working together to better understand the most recent CSO data. NISRA should continue to work with other organisations such as CSO, ONS (which has its own extensive programme to investigate trade asymmetries) and HMRC as appropriate to further analyse trade asymmetries. Publishing details of its findings can help further reassure users about quality.

Presentation of results

- 1.38 As a result of NISRA's ongoing engagement, users reflected that the public value of BESES has increased over the last few years. BESES have been essential for explaining trade flows between NI and GB both in the run up to and post EU Exit. Users told us that the NISRA team is helpful, provides added analysis within the constraints of the data and that it clearly communicates any issues with the data. NISRA has acted on user feedback by producing documents to explain the differences between [BESES and HMRC RTS methodologies](#) and produced [PowerPoint presentations](#) at points on the timeline towards EU Exit. NISRA receives high volumes of queries via email and phone and responds to them often promptly. Additionally, NISRA has also provided training sessions about BESES to

⁴ Bilateral trade asymmetries occur when the reported exports from country A to country B do not match the reported imports to country B from country A.

colleagues in the Department for the Economy. However, some users told us that although the BESES statistics team is responsive and there are good working relationships, they would always welcome new and innovative ways to engage them such as the use of webinars or user fora after publication so they can ask general questions about the statistics.

- 1.39 The majority of BESES results are now presented in both HTML and PDF formats. NISRA also supplies alternative data presentations of BESES, for example demonstration tables in Excel which are not an open format and reference tables in ODS, an open format that improves the usability, accessibility, and machine readability of statistical spreadsheets. However, the Open Document Spreadsheet files are not easily accessible from the statistics landing page; NISRA should update the landing page with a textbox to highlight to users the different formats available and improve user access to the statistics.
- 1.40 NISRA publishes several background and methodology documents alongside the statistics on its website, including a [Quality Report](#), a [Summary of Usage](#) document, a [Development Plan](#) and a [Background Notes](#) document. These documents give a detailed and helpful account of the methods used to produce the data and highlight any limitations but there is a lot of repeated information making navigation confusing for users. For example, background information to BESES and user lists are provided in a separate background information document, in the summary of usage document and again in the development plan. The “uses” of BESES are covered in both the summary of usage and development plan.

Requirement 2: To aid use and re-use of BESES data, NISRA should (a) update the statistics landing page with clear information to users on how to navigate BESES and an explanation of the different formats available (b) improve the presentation of quality information.

- 1.41 Understanding the effects of inflation on BESES can be important for users because it gives them a more-accurate reflection of the real value of trade, the competitiveness of businesses in international markets and could lead to more-informed policy decisions around investments. We recognise that producing real-terms estimates depends on the availability of appropriate deflators and at present trade-in-services deflators are not published. However, we consider that as part of its ongoing engagement with users, NISRA should establish the extent of demand for such a series and use that knowledge in its prioritisation.

