



Quality and methodology report: Trade and investment factsheets

Last updated: February 2024

This report outlines the quality and methodology information relevant to the [‘Trade and Investment factsheets’](#) official statistics release published by the [Department for Business and Trade](#) (DBT). This report supports users to understand the strengths and limitations of these statistics, ensuring that DBT is compliant with the quality principles as stated in the [Code of Practice for Statistics](#), and therefore, should help to reduce the risk of misusing data.

High quality statistics are fundamental to building trust in government statistics. Therefore, this quality and methodology report aims to ensure that statistics used in the Trade and investment factsheets are to a level of quality that meets users’ needs, and that users are informed about the quality of statistical outputs, including estimates of the main sources of bias and other errors.

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1. Background Information

1.1 Introduction

The DBT [‘Trade and investment factsheets’](#) are a set of compendium documents which provide the latest trade and investment statistics between the UK and over 220 individual trading and investment partners overseas. The factsheets bring together a wide range of UK data produced by the Office for National Statistics (ONS) and HM Revenue and Customs (HMRC), as well as international data produced by the United Nations Conference on Trade and Development (UNCTAD), the Organisation for Economic Co-operation and Development (OECD), among others. All data used within the Trade and investment factsheets are publicly available and are listed in [Chapter 3](#) of this document. The factsheets also present previously unpublished statistics on UK market share, which are calculated using publicly available data from the ONS and UNCTAD.

It is recommended that users download the most recent version of the factsheets and do not attempt to compare these with older versions, to ensure the use of the latest and most accurate statistics available. Many of the data sources are subject to revisions, including revisions to previous years’ data. All figures presented in the factsheets accurately represent the data available from those sources at the time of writing. The factsheets will be updated and revised as and when updates to the data are available. Given the regularity of these updates and to prevent users from using inaccurate or outdated data, historic versions of the factsheets will not be archived on GOV.UK but are available on request by e-mailing statistics@businessandtrade.gov.uk.

The [Trade and investment factsheets](#) were first published by DBT on GOV.UK on 12 February 2021. Forthcoming dates for publication will be made available on the [DBT research and statistics release calendar](#) on GOV.UK and are aligned to other major trade and investment statistics publications, as set out in [Chapter 3](#). The next available update to these factsheets will also be highlighted within the Trade and investment factsheets themselves.

DBT welcome any feedback about the factsheets or this quality and methodology report. Please submit any comments, questions, or suggestions to statistics@businessandtrade.gov.uk.

In addition, DBT own and produce the [Trade and investment core statistics book](#) which provides the most up to date snapshot of the UK’s overall trade and investment position to/from the world. These data are based on the same data sources as the Trade and investment factsheets and therefore are comparable between the two publications. The core statistics book should be used if overall trade or investments statistics are required for the UK as a whole, whereas the Trade and investment factsheets should be used when there is a focus on the UK trading and investment relationships with partner countries/territories. A full list of all other statistical series that are published by DBT can be found on the [‘Statistics at DBT’](#) webpage.

1.2 Statistics Designation

Official Statistics are statistics produced by UK crown bodies, those acting on behalf of crown bodies, or those bodies specified in statutory orders, as defined in section six of the [Statistics and Registration Service Act 2007](#).

The responsible government Minister, acting on the advice of their Chief Statistician, and in accordance with the guidance issued by the National Statistician on identifying official statistics, determines whether statistics should be treated as Official Statistics.

The term Official Statistics includes three types of statistics produced by UK public bodies:

- **Official Statistics** are statistical releases that comply with the [Code of Practice for Statistics](#), but have not been formally assessed by the Office for Statistics Regulation (OSR). The Trade and investment factsheets are an example of Official Statistics as they have been assessed internally as adhering to the code, however since no formal assessment has been undertaken by the OSR they cannot be labelled as 'National Statistics'.
- **National Statistics** are a subset of Official Statistics which have been assessed by the OSR as being fully compliant with the [Code of Practice for Statistics](#) to ensure they meet the highest standards of trustworthiness, quality, and value in Government statistics.
- **Experimental statistics** are a subset of Official Statistics which include newly developed or innovative statistics. These are published as experimental so that users and stakeholders can be involved in the assessment of their suitability and quality.

More information on the [labelling of Official Statistics](#) can be found on the Government Statistical Services (GSS) webpage.

The Trade and investment factsheets are designated as Official Statistics. Furthermore, within the DBT Trade and investment factsheets, data sources produced in the UK, such as from the ONS and HMRC are all based on Official Statistics publications.

Foreign direct investment (FDI) data published by the ONS, as well as trade in goods data by UK region, published by HMRC, are classified as National Statistics, as they have been assessed by the OSR as being fully compliant with the [Code of Practice for Statistics](#).

Trade by services type data published by the ONS are currently designated as experimental statistics while they continue to develop their methodologies.

While international data providers are not assessed using these same criteria, they are provided in this publication as DBT have deemed them to be suitable for their use in these factsheets. This judgement is based on peer review within DBT where their data quality has been assessed. More information on how these data providers adhere to international data quality standards can be found for each individual dataset in [Chapter 3](#).

1.3 Data update schedule

Please see [Chapter 3](#) for more detailed information about each data source listed here.

Publication	Data provider	UK designation of statistics	Updates from data providers	DBT update frequency on GOV.UK
Quarterly 'UK total trade' statistics	ONS	Official Statistics	Quarterly	Quarterly
UK Trade monthly statistics	ONS	Official Statistics	Monthly	No regular monthly update
Trade statistics by commodity type	ONS	Official Statistics	Monthly	No regular monthly update
Trade statistics by service type	ONS	Experimental statistics	Quarterly	Quarterly
UK market share ¹	ONS and UNCTAD	Not applicable (combines two datasets from this list and is not published elsewhere)	Quarterly (ONS) and Bi-annual (UNCTAD)	In-line with update frequency for the ONS quarterly trade and UNCTAD statistics
Trade in goods by UK region	HMRC	National Statistics	Quarterly	In-line with update frequency for the ONS quarterly trade statistics
Trade in services by mode of supply	ONS	Experimental Statistics	Annual	Annual
Number of VAT-registered businesses trading goods	HMRC	Official statistics	Quarterly	In-line with update frequency for the ONS quarterly trade statistics
TiVA: Trade in Value Added	OECD	Produced by other international organisation	Annual	Annual
Foreign Direct Investment (FDI)	ONS	National Statistics	Annual	Annual, usually December
Headline trade and investment data reported by international providers	UNCTAD	Produced by other international organisation	Annual	Bi-annual, but may vary
Economic data and projections	IMF	Produced by other international organisation	Bi-annual	Full dataset updated bi-annually in April and October
Top commodities traded with the world	UN Comtrade	Produced by other international organisation	On a continuous basis	Updated in line with the ONS UK quarterly trade statistics, but may vary
Top service types traded with the world	ITC Trade Map	Produced by other international organisation	Annual	Annual

¹ 'UK market share' is a set of derived statistics using ONS and UNCTAD data, see [Section 3.12](#) for more information.

1.4 Release schedule and revisions policy

Due to the designation of these statistics as Official Statistics, DBT will notify users when they plan to publish new editions and if any revisions are required, in line with [T3.9 in the Code of Practice for Statistics](#). A revision is defined as any change to official statistics in the public domain. These revisions can take the form of pre-announced revisions, or un-announced revisions such as when data updates are published without prior knowledge.

Pre-announced factsheet editions

- **Planned editions due to the release of pre-announced data from data providers** – These are when new editions of the factsheets are published which present the latest statistics following the release of new data. Examples of these regular data updates include the publication of most recent quarterly data for the headline trade statistics, as well as revised ONS data which feeds into the calculation of the UK market share statistics.

The dates of these editions will be announced in advance via the [government statistics release calendar](#) as the data providers also pre-announce the publication of this new/revised data. The update frequency of each data source is provided in [Section 1.3](#).

When the new data are likely to be highly revised from previous editions, users will be notified ahead of time with a summary of its impact included within the factsheets.

- **Unplanned editions due to factsheet revisions** – The DBT statistics team regularly review and quality assure the factsheets before they are published (see [Section 4.1](#) for more information on the quality assurance processes). Whilst the fully automated production process reduces the risk of introducing errors, there may be occasions where errors appear in the factsheets due to code not working as intended. For example, this could happen when the data provider changes how the data is presented from previous data releases, such as the change in a column name or a change in formatting from a .csv to .xls document.

There is a thorough quality assurance process in place to prevent these errors, as detailed in [Section 4.1](#), but errors may only be found after the publication of the factsheets. If these errors are small in impact, these revisions will be made at the time of the next scheduled release. However, if the errors significantly affect the users' ability to use the factsheets correctly, a revised edition of factsheets will be published if agreed by the DBT Chief Statistician. This will be considered on a case-by-case basis. The impact of these revisions will be detailed on the GOV.UK website as well as within the factsheets where appropriate.

Unplanned factsheet updates

- **Unplanned editions due to the release of unannounced data from data providers** – These unplanned editions are similar to planned editions but for data updates where DBT did not have prior knowledge on the exact date of release. This can happen for data from international data providers, such as UNCTAD and IMF, where the exact date of the data update is unknown and when only the month of release is provided online.

The impact of the unplanned data schedules will be reviewed by the DBT statistics team to determine if a new edition is required to be published. This will be considered on a case-by-case basis whether a new edition of the factsheets are required. If a new edition is required, this will be announced on GOV.UK as soon as possible and users on GOV.UK will be informed about the reason of this unplanned edition.

- **Revisions due to conceptual or methodological changes to data sources** – These revisions account for substantial methodological changes. As these methodological changes may have a large impact on the data presented, the factsheets may need substantial changes to its dissemination to reflect these differences. Each dataset has their own individual revisions policy with the data provider, detail on where this information may be found is provided in [Chapter 3](#).

Where major changes to datasets occur, DBT will ensure the impact of these changes are made clear within the factsheets as well as on the GOV.UK website. If these revisions are substantial in impact, this data may be caveated or temporarily removed while these methodological changes are implemented in the factsheets.

As the Trade and investment factsheets are classed as [Official Statistics](#), DBT are required to provide prior notification of the release dates of the factsheets. In the event of revisions occurring by data producers, this will be communicated upfront, with a notice to users provided within the affected section of the factsheets.

2. Quality Dimensions

2.1 What is quality?

Quality is defined in terms of how well outputs meet user needs. The [Code of Practice for Statistics](#) states that quality means that statistics fit their intended uses, are based on appropriate data and methods, and are not misleading. This definition is a relative one allowing for various perspectives on what constitutes quality depending on the intended use.

In order to determine whether outputs meet their needs, quality is measured in terms of the quality dimensions of the [European Statistical System](#). These are:

1. **Relevance** – Relevance is the degree to which statistics meet current and potential user needs in both coverage and content.
2. **Accuracy and reliability** - Accuracy is the closeness between an estimated result and the (unknown) true value. Reliability is the closeness of early estimates to subsequent estimated values.
3. **Timeliness and punctuality** - Timeliness is the time gap between the publication and the reference period of the estimate. Punctuality is the gap between planned and actual publication dates.
4. **Accessibility and clarity** - Accessibility is the ease with which users can access the data. Clarity is the quality and sufficiency of the metadata, illustrations and accompanying advice.
5. **Coherence and comparability** - Comparability is the degree to which the data can be compared over time and domain. Coherence is the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar.
6. **Cost, burden, and confidentiality** – Cost is a summary of the financial burden these factsheets have. Burden is the resource required to generate the factsheets for publication. Confidentiality covers whether there are any issues with data being published into the public domain.

Please note that the information in this chapter reviews these quality dimensions with respect to the [Trade and investment factsheets](#), rather than appraising the quality of each individual data source. The quality and methodology of each individual data source is explored in [Chapter 3](#), with links provided for more information from each data provider. Further information on the quality assurance processes for the factsheets can be found in [Section 4.1](#).

2.2 Relevance

The Trade and investment factsheets were a new publication from February 2021 which draws together many different trade and investment data sources into one single compendium document for each individual trade and investment partner. This is done to improve the access of these statistics by providing them in a clear and consistent manner between the UK and its trading/investment partners and presenting a 'single version of the truth'. This single version of the truth is important to ensure consistency and accuracy in the use of these statistics.

This publication provides a reference product for both 'data foragers'², who require summary statistics with links to raw data for further analysis, and 'inquiring citizen' users, who require simple easy-to-read headline statistics to quote from. While the factsheets' main users are not necessarily 'data experts', the hyperlinks given in the footnotes throughout the document show where raw data can be found for those users wanting access to the data.

The Trade and investment factsheets were an existing product in DBT before their publication on GOV.UK from February 2021 onwards. Before this publication, existing users included:

- DBT colleagues to assist in the Government's policy making on trade and investment.
- DBT colleagues for use in briefings and speeches, e.g. by Ministers or senior managers.
- Foreign, Commonwealth and Development Offices (FCDOs), including by His Majesty's Trade Commissioners (HMTCs), for the monitoring of individual partners.
- Analysts in DBT or FCDOs, who identify past trends as well as forecast future projections.

Publishing these factsheets into the public domain has allowed a wider range of users to access these factsheets. Some of these include:

- Analysts that were unable to access the factsheets before, such as analysts in other government departments or those in the private sector.
- Media outlets who wish to see headline trade statistics in a more accessible format without the use of in-depth knowledge of raw data or data providers.
- 'Inquiring citizen' users who wish to view headline trade and investment statistics without in-depth knowledge of the raw data or data providers.

Work has been done within DBT and the FCDO to review the effectiveness of these factsheets with its internal users. This has included the addition of new data sources before publication, as well as ensuring statistics are as clear as possible to all users. A presentation peer review group in DBT also reviewed the factsheets before their first publication on GOV.UK. If users wish to provide feedback on the factsheets, please e-mail statistics@businessandtrade.gov.uk.

DBT will continuously review the factsheets' relevance to users following feedback from stakeholders. DBT will further perform a more detailed review of the factsheets at least every 12 months to ensure their quality continues to be high and included statistics remain relevant to all users. This more detailed review will involve sourcing views from users of the factsheets on the

² More information on user personas can be found at: <https://style.ons.gov.uk/category/writing-for-the-web/personas/>.

dissemination of statistics and asking if any new datasets should be included. The Chief Statistician at DBT will be informed of any recommendations following these reviews.

Factsheet review – March 2023

In March 2023, DBT undertook a survey to gather views from both internal and external users of the Trade and Investment factsheets. The survey covered the content and the design of the factsheets. Content refers to the trade and investment statistics included within the factsheets and the review aimed to assess whether further statistics are required by users, if any current data needs amending (for example, inclusion of time series data) or if any need removing. Design refers to how the information in the factsheets are displayed and whether there are better ways to present the statistics.

The survey received 74 respondents, but not all responses were complete, leading to 58 full responses. The respondents varied, as did their uses of the factsheets, but the majority of users requested the following changes:

- Increased Trade in Services and Investment Data
- Time-series data for market share and percentage comparison for top five trade in goods by commodity type and top five trade in services by service type
- Greater annual data for headline statistics

The results of all responses have been analysed by the Country and Sector Statistics team, and based on the necessity and priority of users, two distinct phases to incorporate changes desired by users have been planned. Once these phases have been implemented, and feedback acquired, further changes based on the survey results may be investigated further. All results were recorded and noted; however, some changes were either not feasible or did not fit the remit of the factsheets. If you wish to discuss anything further, please do get in touch via statistics@businessandtrade.gov.uk.

The phases follow as:

Phase 1 (Autumn 2023):

- Inclusion of annual data in the summary statistics page
- Inclusion of Trade in Services by Modes of Supply dataset

Phase 2 (Early 2024):

- Inclusion of FDI by sector dataset
- Addition of Market Share time-series
- Comparison of previous period (% change) for Trade in Goods by Commodity and Trade in Services by Service type

The aim of these changes is to ensure the factsheets best fit the needs of users, by improving the current display and information available of statistics already within the factsheet, or increasing the depth of trade in services and investment statistics included.

2.3 Accuracy and reliability

The Trade and investment factsheets are produced via a Reproducible Analytical Pipeline (RAP)³ using the software package 'R'. Not only does using RAP greatly reduce the production time, but it also reduces human interaction needed and therefore minimises risk of errors. Any errors that do occur are likely to be systematic, and therefore, only need to be fixed once. Therefore, these statistics are considered to be robust and reliable. A quality assurance process takes place throughout the production process in R as well as checking the end products before their publication. More information on the DBT quality assurance process can be found in [Section 4.1](#).

There are checks in place to ensure accuracy is maintained between the data provided by the data owners and data presented in the factsheets. All liability for the quality and accuracy of these individual statistics are with the data owners. More information on data sources and where quality reports can be found from the data owners are shown in [Chapter 3](#).

2.4 Timeliness and punctuality

The time lag between the data updates from certain data providers and the Trade and investment factsheets publication on GOV.UK will be approximately 5 working days. This means that there may be occasions where the data contained in the factsheets may not reflect the latest available data. Please note that not all data updates will prompt a new version of the factsheets to be published. This may be because of one of the following reasons:

- There are multiple data updates scheduled from different data providers in a short space of time, typically within a week of each other. In these cases, to reduce burden, all data updates will be included in a single factsheet update after all data has been published.
- There was no scheduled factsheet release as the exact date of a data update was not known in advance. This can happen for international data providers where the exact date of the next data update is not known. In these cases, DBT will ensure any update needed to the factsheets is announced on the GOV.UK release calendar as soon as possible, with an aim to publish within 5 working days. The factsheets may also be updated on an unscheduled basis if the data owners provide revised data, see [Section 1.4](#) on the revisions policy for further details.
- Not all data source updates prompt a new version of the factsheets to be published. This is true, for example, when new UN Comtrade data are published for certain trading partners because they update on a continuous basis. The factsheets will update these two data sources alongside the ONS UK quarterly trade statistics release.

All scheduled releases will be captured within the GOV.UK release calendar, which provides at least 12 months' advance notice of release dates. DBT will also notify users if there are any changes to the pre-announced release schedule and provide the reasons for the change, as set out in the [Code of Practice for Statistics](#). DBT is committed to releasing its statistics in an open and transparent manner that promotes confidence.

³ Reproducible Analytical Pipelines (RAP) is a methodology for the production of statistical publications, that was developed during a collaboration between the Government Digital Service (GDS) and the Department for Digital, Culture, Media & Sport (DCMS) in 2016. The project aimed to improve the production of a statistical bulletin by introducing techniques from software engineering, data science, and academia. A cross government blog about RAP and data science techniques to improve statistical outputs can be found at: <https://dataingovernment.blog.gov.uk/2017/03/27/reproducible-analytical-pipeline/>.

2.5 Accessibility and clarity

All data used in the Trade and investment factsheets are from publicly available data sources which can be downloaded free of charge. The factsheets include links to the source data in the footnotes section for each statistic presented. Hyperlinks to each data source used within the factsheets, including notes on its quality and methodology, are available in [Chapter 3](#) of this document.

In line with the government [accessibility requirements](#), the Trade and investment factsheets are provided in a PDF format which have been made to pass these [AA accessibility standards](#) for GOV.UK publications. An internal accessibility audit of the factsheets was undertaken, and items which were identified in this audit were amended prior to their first publication onto GOV.UK. DBT continues to review the accessibility of these factsheets, ensuring they adhere to the government accessibility requirements. Prior to each publication, DBT check a random sample of factsheets using accessibility testing software. These factsheets are also reviewed by the DBT Digital Team. If you have any feedback on the accessibility of these documents, please contact statistics@businessandtrade.gov.uk.

2.6 Coherence and comparability

There may be some differences in the coherence between different data sources presented in the factsheets. Some of the reasons for these differences are given below:

- Some partners may be defined differently between data providers and so different data sources may not be directly comparable within the factsheets. An example of this is where ONS trade data for the United States includes trade with Puerto Rico, while other data providers do not contain trade with Puerto Rico in the statistics shown for the United States. A further example is where UNCTAD data for Liechtenstein are contained within the data for Switzerland, whereas these two partners are separated for other data providers. Where there are discrepancies in definitions, these are outlined within the relevant footnotes.
- The statistics from the UK data providers ONS and HMRC may differ from other international data providers due to trade and investment asymmetries. It is recommended for data on the UK that UK data providers are used instead of other national data providers for consistency. More information on asymmetries can be found in [Section 5.2](#).
- Care must be taken when comparing different data sources from UK data providers: some data is seasonally adjusted whereas others are not, furthermore, while ONS data are recorded on a balance of payment basis, HMRC data are recorded on a physical movement basis. Definitions of these trade measures can be found in [Chapter 6](#).
- Datasets may show figures in different currencies, where an exchange rate conversation must take place for the figures to be comparable. Data have been presented in the same currency as the source data.

Unless stated otherwise, the data presented in these factsheets are comparable over time, and where possible, any changes to methodology are applied to the whole series to ensure comparability is maintained. Time-series data for every dataset are not provided in the factsheets, where historic data can be found online at the data owners' webpage. The range of

the time series varies for each data provider, where DBT provide the last 10 years' worth of data for the headline statistics for the ONS data sources.

2.7 Cost, burden, and confidentiality

The data used are all derived from other primary data sources, so therefore, no extra resource is required to collect data. Due to the automated processes of producing the Trade and investment factsheets in the software package R, there is a vastly reduced cost and burden associated with producing the publication compared to if it was done manually. No extra cost is required to publish these factsheets.

There are no confidentiality issues with the data contained in the factsheets as the data are already in the public domain. The UK data providers, ONS and HMRC, also provided DBT permission to use their data before the first publication of the factsheets in February 2021.

Pre-release access is not applicable to the Trade and investment factsheets, and therefore no period of pre-release access is granted. [Pre-release access](#) is the practice of making official statistics, and the written commentary that accompanies them, available in advance of their publication to specific individuals not involved in their production. In most cases, this includes government ministers and other key officials who may be required to provide comment on the official statistics in a public forum. Each official statistic series or release may have its own limited list of:

- ministers (which can include ministers in other government departments or those from the Scottish government),
- special advisors,
- and officials.

This access allows ministers to respond to questions or make statements about the statistics shortly after publication at 9.30am.

Pre-release access is not applicable for the Trade and investment factsheets as it is not the first release of these data into the public domain. This decision was made in discussion with the Chief Statistician in DBT.

3. Data Sources

This section provides a list of the data sources used in the [Trade and investment factsheets](#), which includes information on the methodology and where to find more details from the data provider. The statistics are presented in the order they appear in the publication.

Please note that UK market share statistics are the only statistics contained in the factsheet that are not explicitly published by other data providers. These statistics are derived within DBT using publicly available data from the [ONS](#) and [UNCTAD](#) datasets. More information on these statistics can be found in [Section 3.12](#).

3.1 Quarterly headline trade statistics (ONS)

The headline trade statistics presented for the latest rolling four quarters come from the dataset on [‘UK total trade: all countries, seasonally adjusted’](#). These data provide statistics for total trade (exports and imports) for both goods and services between the UK and other trading partners. These seasonally adjusted data are used for the headline trade statistics for all partners.

On 27 January 2022, ONS published a new dataset presenting UK trade by each partner market on a seasonally adjusted basis. All factsheets now present seasonally adjusted headline trade statistics from this new ONS [‘UK total trade: all countries, seasonally adjusted’](#) quarterly dataset. Prior to the 3 February 2022 publication of the factsheets, data on a non-seasonally adjusted basis were presented for most partners, see [Section 3.13](#) for more details. All UK total trade data are presented in nominal terms, meaning no adjustment has been made to account for changes in inflation or exchange rates.

The goods data presented by the ONS are mainly sourced from data collected by HMRC via customs declarations on the physical goods exported from and imported to the UK. However, to conform to international reporting standards for goods trade on a ‘balance of payment’ basis, adjustments are made to include trade which does not involve a change in ownership. The services data presented by the ONS are collected from various sources, though the bulk of the data reported come from data collected by the International Trade in Services Survey (ITIS). More detailed information on the sources of ONS goods and services data can be found in the [quality and methodology report](#) for the ONS release.

Further detail on the methodology of these statistics from ONS can be found in their [quality and methodology information](#) page. ONS trade statistics are currently classified at time of writing as Official Statistics, work has been undertaken to redesignate these trade statistics as [National Statistics](#) after their [removal](#) in 2014. Information on the ONS’ development plan to strengthen the reliability and robustness of UK Trade statistics can be found on the [ONS website](#).

Changes to EU trade in goods data collection

Following the end of the EU Exit transition period on 31 December 2020, the free movement of goods and services between the UK and the European Union (EU) ended. This has meant the HMRC data collection methodology for the trade in goods statistics changed, where ONS source their trade in goods data from this HMRC data.

From January 2021 onwards, exports from Great Britain (England, Scotland and Wales) to the EU are captured by customs declarations, rather than by the [Intrastat survey](#), in line with exports to non-EU partners. From January 2022, the Goods Vehicle Movement Service (GVMS) was introduced for all UK exports to the EU. This ensures all export paperwork is completed before vehicles enter the port. All exports of goods from Great Britain are recorded on their departure date.

In line with Great Britain exports, from January 2022 onwards, Great Britain imports from the EU are now also captured by customs declarations. Data from the Intrastat survey is now only used for the movement of goods between Northern Ireland and the EU. This means the headline import statistics between the UK and EU countries may include a mixture of data collected via the Intrastat survey and by customs declarations.

On 15 December 2021, the government extended the current staged customs control arrangements for moving goods from the Republic of Ireland to Great Britain while discussions on the trade protocol continue. This means that Great Britain imports from the Republic of Ireland could be delayed - leading to potential underreporting in early 2022 and overreporting in late 2022. Please note, Great Britain imports from Ireland are reported as they are declared and may not reflect the time period of trade. More information can be found on the [ONS webpage](#).

These changes could potentially impact the quality of the data collected as businesses may need to adjust to new practices for trade. This could mean future revisions are likely to be larger than previously. More information on these data collection methodology changes can be found on the [HMRC overseas trade in goods statistics methodology and quality report](#) webpage.

Understanding seasonal adjustment

The factsheets present seasonally adjusted headline trade statistics, which provide a better indication on the latest trends for trade between the UK and its partners than non-seasonally adjusted data. Seasonal adjustment makes it easier to draw meaningful comparisons between data ensuring the statistics presented are not affected by variation associated with the time of year. For example, social, cultural and religious events – such as increased retail sales on the run up to Christmas which may influence trade in certain quarters. It also includes the removal of other calendar effects which do not necessarily occur in the same month (or quarter) each year, such as quarters which have more bank holidays.

Please note, not all data series within the seasonally adjusted dataset are affected by seasonal effects. Where this occurs, data are not distorted by seasonal influences and so figures will remain unaltered for some partners, when compared to the non-seasonally adjusted dataset. Non-seasonally adjusted data by overseas trading partner can be found on the [ONS website](#).

Seasonal adjustment is applied to each data series independently. This means that summing values across partners may not equal the total figure presented for a trade bloc or group of partners.

3.2 Monthly trade statistics and trade in goods by commodity (ONS)

The headline trade statistics in [Section 3.1](#) are based on quarterly data and present the data for the latest four quarters. However, the timeliest data for trade are published in the ONS publication, '[UK trade](#)'. These data are provided on a **monthly** basis, including total UK trade in goods and services, and trade in **goods only** by partner market. These data are used towards the end of the trade section, to provide an early indication of trends in trade of goods only in the latest 12 months, as well as trade in goods by commodity.

These statistics on 'recent trends in trade for goods only' use the ONS data on '[Trade in goods: all countries, seasonally adjusted](#)'. These data are seasonally adjusted and can be compared with the headline UK trade statistics as presented in [Section 3.1](#).

Trade in goods by commodity statistics use the ONS data on 'Trade in goods: country-by-commodity' for [exports](#) and [imports](#). While this dataset is updated on a monthly basis, these commodity data are consistent with the same time period as presented for the headline trade statistics, to enable comparability. Therefore, more recent time periods for trade in goods by commodity by trading partner can be found in the ONS exports and imports datasets. Trade in goods by commodity and trading partner are not seasonally adjusted and should **not** be compared to seasonally adjusted datasets, including the UK headline trade statistics as presented in [Section 3.1 and the recent trends in trade for goods only for the latest 12 months](#). More information on the methodology from ONS on seasonal adjustment can be found on the [ONS website](#).

The trade in goods by commodity data are classified using the latest version of the [standard international trade classification](#) (SITC). SITC is designed to provide the commodity aggregates required for purposes of economic analysis and to facilitate the international comparison of trade-by-commodity data. Other data sources may use other classifications, such as the [harmonized system](#) (HS) which is used for [UN Comtrade](#) data presented in the factsheets.

ONS provide different levels of disaggregation in their data. The highest level is the nine 1-digit SITC codes (e.g. '3 Fuels'). These are broken down into lower 2-digit SITC codes (e.g. '33 Oil') which reflect different products. For some commodities these are further broken down into lower 3-digit SITC codes (e.g. '33R Refined Oil'). There are multiple hierarchies for each 1-digit SITC code. DBT present data in the factsheets at the lowest level of disaggregation available in the ONS dataset. It is recommended that users also use the lowest level of disaggregation available in the ONS dataset to ensure consistency with our figures, although ONS provide data on all levels in each commodity's hierarchy. Please note, the total value of commodities at the 3-digit SITC code will not equal the total value at the 1-digit level due to overlap – with some commodities fitting into more than one commodity category. A full list of the lowest-level SITC codes in the ONS dataset are provided in [Annex A](#).

The percentage of the total UK exports/imports of goods accounted for by each of the top five commodities are not provided for some trading partners. This is due to the value of total UK exports/imports of goods being rounded to the nearest £ million, with commodity trade values being given to a greater level of accuracy to the nearest £10,000. As a result, in some cases, the percentages of the total accounted for by each commodity would sum to more than 100%. Therefore, these percentages are only presented if the total value of exports/imports are over £125 million with that trading partner. The percentages can be obtained if required from the original ONS dataset for [exports](#) and [imports](#).

The ONS monthly trade in goods data are mainly sourced from data collected by HMRC in the same way as detailed in [Section 3.1](#) . All data are presented in nominal terms, meaning no adjustment has been made to account for changes in inflation or exchange rates. These data are affected by the change in methodology for trade in goods statistics following the end of the EU Exit transition period, as outlined in [Section 3.1](#). This means the monthly trade statistics between the UK and EU countries may include a mixture of data collected via the Intrastat survey and by customs declarations, as they are presented on a 12 month rolling basis which may span more than one calendar year.

More detail on the methodology of these statistics from ONS can be found on their [quality and methodology information](#) page. ONS trade statistics from the '[UK trade](#)' publication are currently classified at time of writing as Official Statistics, see [Section 3.1](#) for more detail on work undertaken by the ONS on these statistics to make these [National Statistics](#).

3.3 Trade statistics by service type (ONS)

Trade by service type data are published in the ONS release: '[UK trade in services by partner country](#)'. These data are published on a quarterly basis and are not seasonally adjusted.

Data on services and service types are collected from a number of different sources. The International Trade in Services Survey (ITIS) accounts for over half of all UK trade in services⁴, where more information on this survey can be found on the [ONS website](#). Other sources of data include the International Passenger Survey (IPS) and other UK Government departments. More information on the surveys that feed into the data collection for trade in services data are provided in the [ONS Balance of Payments quality and methodology report](#). Furthermore, in some cases such as the IPS⁵, surveys have been suspended and alternative methods have been used to estimate trade in services data. More information on the impacts of data collections due to the COVID-19 pandemic can be found in the latest [UK Trade release](#).

The ONS by service type data are classified using the latest version of the [extended balance of payments services](#) (EBOPS) classification. EBOPS is an internationally recognised classification for trade in services and is based on 12 higher-level classifications of services. The ONS [dataset](#) does provide lower disaggregation for some of these 12 higher-level classifications, however, the decision was taken to not report these disaggregated service types to avoid issues with suppressed data (see next paragraph for how these issues can effect comparisons), as well as a lack of coverage for some trading partners at the lower levels. A full list of EBOPS codes that services are broken down in the factsheets are given in [Annex C](#).

There are differences in the coverage of the quarterly data due to the suppression of figures. This suppression is done to protect the confidentiality of any individual companies where there are low amounts of service types traded for certain partners. This may mean the top service types are not reflected accurately in the latest four quarter rolling data due to lack of data for some quarters, and comparisons from previous quarters should be treated with caution. More information on these issues can be found in the '[UK trade in services by partner country](#)' release. Data are presented for the top five services traded between the UK and partner countries/territories. Please note that data on trade by service type are limited to approximately the largest 65 trading partners only, although world totals are also provided in this [dataset](#).

Data by service type are currently classified at time of writing as being [experimental statistics](#) which include newly developed or innovative statistics. Information on the ONS' trade development plan to strengthen the reliability and robustness of service type statistics can be found on the [ONS website](#). More detail on the methodology of these statistics from ONS can be found on their [quality and methodology information](#) page.

⁴ ONS stated the ITIS Survey made up approximately 59% of total exports and 48% of total imports of the trade in services in 2017.

⁵ ONS states the IPS, the main source of trade in travel services, makes up around 8% of total trade. While the IPS is suspended due to the COVID-19 pandemic, the ONS continue to investigate alternative ways to measure and develop estimates for travel services.

3.4 Trade in goods by UK countries and English regions (HMRC)

These data present exports and imports of goods in the UK by trading partner broken down by UK country or English region. The 12 regions specified in this dataset refer to nine separate regions in England, along with Wales, Scotland, and Northern Ireland. These 12 UK regions are based on International Territorial level 1 (ITL1), which are equivalent to the *Nomenclature of Territorial Units for Statistics* level as defined by Eurostat as [NUTS1](#) regions. These data are published on a quarterly basis in the [HMRC UK regional trade in goods release](#).

The latest annual totals are presented in the factsheets which are provisional and subject to change. The latest data are based on goods trade from an 'open' time period, where data from 'closed' time periods are finalised and presented in HMRC's [regional trade statistics publication](#).

HMRC does not receive information for goods that either move wholly within the UK or are intangible, and any trade in services are excluded. The regional trade statistics are compiled by merging trade data collected by HMRC with employment data from the [Interdepartmental Business Register](#) (IDBR). A business' trade is allocated to a region based on the proportion of its employees employed in that UK country or English region. Where a trader cannot be matched with the IDBR, its trade is matched with ONS postcode data to obtain the region in which the Head Office of the VAT registered business (importer or exporter) is based.

Not all trade can be allocated to a country in the UK or a single English region. Where appropriate, this trade is denoted as being 'unallocated'. Unallocated trade is not presented in the factsheets but is included in the calculation for the percentage of trade for each UK country and English region. For this reason, the percentages presented may not sum up to 100%. The latest figures are provisional and may be subject to change. Data for smaller trading partners may be unavailable.

The figures provided in this section are **not comparable** to the ones from the ONS in the headline trade statistics. This is because the HMRC data are provided on a **physical movement basis**, while the ONS data are provided on a balance of payments basis (change of ownership), so therefore the datasets will not contain the same trade in goods. Total figures for regional trade will also differ from the [HMRC Overseas Trade in Goods statistics](#) due to the exclusion of non-response estimates and trade in non-monetary gold, which would distort the overall figure for the London region. More information on the magnitude of these differences between HMRC datasets can be found in regional trade publication commentary.

Trade in services by UK region are not available from HMRC sources. However, the ONS have recently developed methodology in estimating services trade by region, and this can be found in their '[International trade in services by subnational areas of the UK](#)' publication. These data are listed as [experimental statistics](#) as they include newly developed or innovative statistics. DBT note this data are available from the ONS, but they are not presented in the factsheets as the HMRC and ONS regional trade figures are provided on different basis.

Further information on the methodology of these statistics from HMRC can be found in the [regional trade statistics methodological paper](#) and the explanatory notes in each statistical commentary. HMRC trade by region statistics are classified as [National Statistics](#) as they have judged to be fully compliant with the [Code of Practice for Statistics](#).

3.5 Trade in services by mode of supply (ONS)

These data present the value of UK exports and imports of services by partner country and mode of supply. They are published on an annual basis, covering 67 countries, in the ONS release [Imports and exports of services by country, by modes of supply, UK](#).

Modes of Supply define the way services trade is conducted. The World Trade Organisation's [General Agreement on Trade in Services \(GATS\)](#) categorises trade in services into four modes of supply, which depend on the territorial presence of the supplier and the consumer at the time of transaction. The four modes are as follows:

- **Mode 1:** Remote trade (a supplier in one country sells a service to a customer in another, without the movement of people).
- **Mode 2:** Consumption abroad (the person receiving the service travels to the supplier's country).
- **Mode 3:** Commercial presence (e.g. a company subsidiary) - this mode is not counted as part of UK services trade on a balance of payments basis and is not reported in this release.
- **Mode 4:** Presence of natural persons (a supplier sends its personnel to the customer's country to provide service).

ONS Trade in Services data is calculated from a variety of different sources, primarily surveys, with the International Trade in Services (ITIS) survey (outlined in Section 3.1) accounting for around 50% of the value of Trade in Services.

The ITIS survey was amended in 2018 to include a question on Modes of Supply, asking businesses to provide an estimate of the percentage of their trade that is delivered remotely (Mode 1), by means such as post, telephone, internet or email. This dataset collects data for Mode 1 only as research by Eurostat found 69% of trade in services is conducted via this mode. This decision was made to help mitigate some of the response burden on businesses and help improve data capture.

Once Mode 1 estimates are finalised for each service type, the residuals are allocated to either Mode 2 or Mode 4 using [Eurostat's proportional allocation of extended balance of payments \(EBOPS\) categories to modes of supply](#). There are exceptions for maintenance and repair and, within other business services, waste treatment and depollution, where residuals are divided between Modes 2 and 4.

For non-ITIS industries (transport, travel, and government services) the allocation of modes of supply is based on [Eurostat's proportional allocation of extended balance of payments \(EBOPS\) categories to modes of supply](#).

Further information on the methodology of these statistics from ONS can be found in the article [Modes of supply: methods](#). ONS imports and exports of services by country, by modes of supply, UK are designated as experimental statistics.

3.6 Number of VAT-registered businesses trading goods (HMRC)

These statistics provide data on the number of businesses that trade in goods (both exporting and importing). These data are published on a quarterly basis alongside the [UK regional trade in goods statistics](#) (RTS) publication.

Please note that prior to mid-February 2024, HMRC's Trade in Goods by Business Characteristics (TGBC) statistics were used to compile estimates on the number of businesses in the UK trading with a country. More details on why DBT have changed the source from TGBC to RTS can be found in section 3.14 below.

Business counts include VAT-registered businesses trading in goods. Data are sourced from customs declarations for trade between Great Britain and the EU and between the UK and non-EU markets, and from Intrastat and VAT data for trade between Northern Ireland (NI) and the EU. Businesses that trade with both EU and non-EU markets are counted only once in the total business counts.

The RTS dataset links goods data sourced from the [Overseas Trade in Goods Statistics \(OTS\)](#) with ONS business statistics sourced from the Interdepartmental Business Register (IDBR) to provide information about the number of businesses that are trading those goods. The IDBR is a comprehensive list of UK businesses used by government for statistical purposes and is mainly sourced from Value Added Tax (VAT) receipts and Pay As You Earn (PAYE) records from HMRC. The IDBR is fully compliant with the [European Union regulation](#) on the harmonisation of business registers for statistical purposes. More information about the IDBR is available on the [ONS website](#).

Businesses trading exclusively below the statistical value threshold for customs declarations (£873 in value and 1,000kg in net mass) are not captured in these statistics. NI-EU movements are captured via trade above the Intrastat threshold (£500,000 for EU imports and £250,000 for EU exports), and by VAT data for those sums below the threshold for both imports and exports. Total UK business counts also exclude private individuals, non-VAT-registered businesses, and trade in non-monetary gold.

Further information on the methodology of these statistics from HMRC can be found in the [methodologies page for overseas trade statistics](#).

Methodological changes for trade between the UK and the EU were introduced for 2021, so business counts data for years from 2021 onwards are not comparable with data for years prior to 2021.

3.7 TiVA: Trade in Value Added (OECD)

Trade in Value Added (TiVA) is a new statistical approach for measuring trade and is different from the headline 'gross' trade statistics presented in these factsheets. The development of TiVA addresses the issue of Global Value Chains (GVCs) by considering the value added by each partner in the production of goods and services that are consumed worldwide. For example, in the case where UK exports are manufactured using imports of raw materials from a foreign partner, TiVA will attribute some of the final UK export value to that foreign partner. In this way, it distinguishes between *domestic* value added by that exporter, and *foreign* value added by importing raw materials used to make the final exported goods and services.

TiVA is a developing metric and should be considered as experimental statistics used as a compliment to gross trade statistics. These results are estimates and should not be over-interpreted. This development was aided by a report on [Research on Trade in Value Added](#) from the Department for International Trade and Cambridge Econometrics in May 2020 which was the first attempt in the UK to explore TiVA in a systematic way. Data from the Organisation for Economic Co-operation and Development (OECD) are used for the TiVA statistics presented in the factsheet, where more information can be found on the [OECD landing page](#).

TiVA statistics are wide ranging and such examples of metrics include:

- the degree to which UK sectors are dependent on imported inputs for their exports (backward linkages);
- the degree to which UK value added is embodied in foreign exports (forward linkages);
- UK's role in GVCs relative to other major economies, at the sector level, and over time;
- UK employment supported by exporting activity;
- how UK's bilateral trade balances change in TiVA terms;
- UK's revealed comparative advantage (RCA) sectors in TiVA terms.

The factsheets provide data on UK forward linkages (i.e. the value added by the UK for trading partners exports), UK backward linkages (i.e. the value added by trading partners for UK exports), and employment supported by exports both in the UK and by trading partners. One limitation of this data can be its timeliness, although the messages from the data should be largely representative for recent years. TiVA data may also be limited for developing countries. Further information on the methodology of these statistics from OECD can be found on the [landing page for TiVA statistics on the OECD webpage](#).

3.8 Foreign Direct Investment (ONS)

Foreign Direct Investment (FDI) are contributions made by a firm or individual in one economy into the business interests located in another economy, with the objective of establishing a lasting interest in the host economy. Generally, FDI takes place when an investor establishes foreign business operations or acquires foreign business assets in a foreign company. FDI plays an important role in economic development, particularly for developing partners.

Data on UK FDI are published by ONS on an annual basis in their [Foreign direct investment involving UK companies release](#) which has been designated as a National Statistics publication. The factsheets present UK-sourced data from the ONS which may differ from international data providers such as [OECD](#) due to investment [asymmetries](#) – this is where the FDI from the UK to another trading partner as reported by UK data providers are different from the values reported to the trading partner. Users are advised to use UK data providers where possible.

UK FDI can be measured in two directions:

- **Outward FDI:** The direct investments of UK-resident companies in other economies.
- **Inward FDI:** The direct investments in the UK from non-UK-resident companies.

The main source of information for UK FDI statistics is the [annual FDI survey](#) where separate surveys are used to collect data on [inward](#) and [outward](#) UK FDI. This is combined with data from the Bank of England for all monetary financial institutions and other sources for property and public corporations in FDI. Survey responses are used to estimate or impute FDI values for every company in the UK's inward and outward FDI populations. More information on the sources and quality of details can be found in the [ONS quality and methodology report](#). Timelier FDI statistics for the whole of the UK are published in the quarterly ONS [UK Balance of payments](#) release, but this does not include breakdowns by investment partner.

The FDI statistics presented here are for the overall **FDI stock**, which measures the total level of direct investment at the end of the year. These stocks are given in **net terms**, which are calculated as investments minus disinvestments. This means **negative** FDI values can occur when disinvestments are greater than investments. Disinvestments are the withdrawal or reduction of previous investments made, e.g. when a firm receives a loan from a partner overseas, or when a firm decides to remove some of its previous investment in a partner overseas.

The FDI statistics presented in the factsheets are based on the 'directional principle', where the data are compiled according to the direction of the investment for the reporting economy. This is different from statistics based on the 'asset/liability principle', where the data are organised according to whether the investment relates to an asset or a liability. The different presentation of the data can result in different estimates for outward and inward FDI. A more detailed look at the differences between the two principals can be found in an [article by the OECD](#).

It is worth noting that ONS statistics on FDI are largely influenced by mergers and acquisitions and therefore can be volatile and cyclical. FDI data are prone to large revisions due to the inclusion of updated information from surveys and revaluations in the value of acquired assets. FDI statistics can also be affected by investment asymmetries as well as 'pass through investments' which is similar to the issue of the 'Rotterdam Effect' for trading in goods. More information on investment asymmetries and 'pass through investments' are found in [Chapter 5](#).

More detail on the methodology of these statistics can be found in the [ONS statistical publication](#) under 'strengths and limitations', as well as on their [quality and methodology information](#) page.

Changes to FDI sampling methodology for 2020 data onwards

On 3 February 2022, the [ONS FDI publication](#) introduced changes to the sampling methodology used to compile estimates of UK FDI. These changes were made to ensure the latest estimates were more representative of UK FDI than estimates before 2020.

These changes include improvements to the FDI population that the ONS draws its sample from. The addition of new commercial data has increased the FDI population coverage, capturing more businesses that had not previously been included in the FDI analysis. This includes greater coverage of minority investment relationships (where these investment have between 10% and 50% of the voting power), and the inclusion of some [special purpose entities](#) that are not fully captured in the Inter-Departmental Business Register ([IDBR](#)). Adding this new commercial data resulted in an increased FDI population between 2019 and 2020: inward FDI increased by 16,100 businesses to 45,500 businesses in 2020, and outward FDI increased by 4,700 businesses to 17,900 businesses during this time. This population is now more representative of businesses in the UK undertaking inward and outward FDI.

As a further result of this new commercial data being used which has increased the FDI population, ONS has reviewed its sampling stratification methods. These methods are used to divide the FDI population into similar groups, known as 'strata', to assist in the sampling of businesses. For the purpose of estimating FDI, stratification is used to calculate estimates for non-sampled businesses, based on similar characteristics such as industry and size of business. The new commercial data, which includes information on shareholder funds, has meant changes in the stratification for some industries in the population for inward FDI. This has had a net increase in FDI stock in 2020 compared to previous years. More detail on the changes for each industry strata are provided on the [ONS website](#). Note that outward FDI stratification methods have remained unchanged between data for 2019 and 2020.

These improvements have tended to increase FDI for new companies which were sampled, as those companies who received the FDI survey for the first time were likely to increase overall FDI stock values. Additionally, where these new companies were not sampled, ONS estimated the FDI for these companies and these often had a positive net effect on FDI stock.

Due to these changes in sampling methodology, caution must be taken when interpreting differences in FDI stock over time, particularly when comparing data for 2020 onwards to data pre-2020. Please note, these methodology changes have led to an increase in reported FDI, particularly inward FDI, in 2020. The effect of these methodology changes will vary between partners, although it is not possible to quantify the magnitude of this impact for individual partners. More information on these sampling methodology changes can be found on the [ONS webpage](#).

3.9 Headline trade and investment data reported by international providers (UNCTAD)

Data from the United Nations Conference on Trade and Development ([UNCTAD](#)) allows users to explore trends in overall trade and investment between that partner and the rest of the world. This section differs from the statistics presented in Sections [3.1](#) and [3.9](#) which only considers trade between that partner and the UK. The statistics presented in this section of the factsheets show the total exports, imports and trade balance for each trading partner, as well as the total outward and inward FDI for each investment partner. This dataset is used over other comparable datasets from international providers due to its high quality as appraised within DBT, as well as its high level of coverage for individual trading partners.

The data presented by UNCTAD are collected from international data providers from each individual economy, which means reporting methods may not be consistent throughout.

There are two datasets from UNCTAD used within the factsheets:

- 1 Trade data on exports, imports, and the overall trade balance (exports minus imports): [Goods and Services \(BPM6\): Exports and imports of goods and services, annual](#).
- 2 Foreign investment data for both inward and outward FDI stock: [Foreign direct investment: Inward and outward flows and stock, annual](#).

All data are presented in USD\$ in billions, in current prices. As it uses current prices, historic data are revised when the latest data are added for the first time. The trade figures are on a 'balance of payments' basis for both goods and services combined and use the latest Balance of Payments and International Investment Position Manual ([BMP6](#)) for its classifications of trade. The investment figures show the FDI stock on a net directional basis (investment minus disinvestment), which in some instances may show negative levels of FDI stock if an individual country/territory removes previous investment with a partner.

Some figures for individual economies are estimated values, where these are presented in *italics* in the data table. Some FDI data is also presented on an asset/liability basis rather than a directional basis; the occasions where this happens can be found by reviewing the raw [dataset](#). These data are published bi-annually with previous data subject to revisions. UNCTAD also publish a [release calendar](#) detailing projected dates of data updates. More historic data than what are provided in the factsheets can be found on the UNCTAD website. More information on the methodology of both datasets can be found on each datasets webpage by clicking the 'i' symbol in the tables title.

3.10 Economic data and projections (IMF)

These data provide a range of macro-economic metrics from the International Monetary Fund (IMF) in their [World Economic Outlook \(WEO\)](#) reports. These macro-economic metrics include:

- Gross Domestic Product (GDP) metrics such as changes in GDP between years,
- Inflation,
- Unemployment rate,
- Population,
- Investment savings,
- Government net lending/borrowing.

DBT present a small range of the metrics included in IMF's bi-annual [WEO](#) reports. Many other published metrics can be found accompanying the releases in their [WEO databases](#). Only data from the full WEO databases are presented in the factsheets, although ad-hoc updates to figures such as real GDP growth may be presented when new updates become available. Projected figures for future years as well as estimated data are presented in *italics* in the table. More historic data than what are provided in the factsheets can be found on the IMF website.

Most of the macroeconomic data presented in the WEO conform broadly to the 2008 version of the System of National Accounts (SNA). Although national statistical agencies are the ultimate providers of historical data and definitions, the IMF are involved in resolving statistical issues, with the objective of harmonizing methodologies for the compilation of these statistics. More in-depth information is available in the [IMF article on assumptions and data conventions](#).

More information on the methodology of each metric can be found when extracting the data directly from the IMF webpage by clicking on the 'i' symbols.

3.11 Top commodities traded with the world (UN Comtrade)

The [UN \(United Nations\) Comtrade Database](#) is a repository of official international trade statistics from many trading partners around the world. This provides data from international data providers on bilateral trade between partners. In particular, this dataset is used as it provides trade by commodity type in a user-friendly manner in their [online tool](#). This dataset is used over other comparable datasets from international providers due to UN Comtrade being a rich dataset for bilateral trade flows in commodity types. The data has also been appraised within DBT as being of high quality.

The data used in the factsheets are presented in UN Comtrade using the [harmonized system \(HS\)](#). This differs from how commodities are presented previously in the factsheets using ONS data which are classified using the [standard international trade classification \(SITC\)](#). The factsheets provide these commodities by HS2 code in these factsheets, although UN Comtrade do provide these at lower levels of disaggregation. A list of all HS2 codes that commodities are broken down for the factsheets are given in [Annex B](#). Note that UN Comtrade presents goods on a physical movement basis unlike the trade data from ONS.

These data are continuously being updated to reflect the latest year of data on a periodic basis. Therefore, more timely data than what are presented in the factsheets may be available directly from [UN Comtrade](#). The webpage can also provide data on trade between two markets by commodity type, although it is advised to use data from UK providers when looking at data for the UK.

As the data download is difficult to produce for all partners in the world, the [API](#) (application programming interface) is used to overcome these hurdles of computational complexity with downloading such large data files. The API is used by DBT to download this data in bulk for the purposes of the factsheets.

More information on the methodology of UN Comtrade trade statistics can be found on their [Trade Knowledgebase webpage](#).

3.12 Top service types traded with the world (ITC Trade Map)

The [ITC \(International Trade Centre\) Trade Map](#) is similar to UN Comtrade and is another repository for official international trade statistics from many trading partners around the world. It differs from UN Comtrade as while it is still based largely on United Nations data, the ITC Trade Map dataset fills in gaps that the UN Comtrade dataset has by 'mirroring' data, e.g. infilling import data by looking at exports from other markets to that same partner and providing estimates on other occasions. This dataset is used over other comparable datasets from international providers due to it being a rich dataset in terms of partners and by service types, and it has been appraised within DBT as being of high quality.

The ITC Trade Map data are produced from several different data sources, with most of the data coming from UN Comtrade, supplemented with data from national statistics agencies. See the [ITC trade map user guide](#) for more information.

The service type data are classified using the latest version of the [extended balance of payments services](#) (EBOPS) classification. This is the same classification that is used for the ONS service type data as shown before. A list of EBOPS codes that services are broken down for the factsheets is given in [Annex C](#). These data are presented on a balance of payments basis.

Like UN Comtrade, the ITC data are continuously being updated to reflect the latest year of data on a periodic basis. Therefore, more timely data than what are presented in the factsheets may be available directly from ITC Trade Map. There may be some information on services trade between two markets by commodity type, although it is not always available, and it is advised to use data from UK providers such as ONS when looking at data for the UK.

More information on the methodology of ITC Trade Map trade statistics can be found on their ['Frequently Asked Questions' webpage](#).

3.13 UK market share statistics

While the factsheets largely present statistics based on publicly available data, the UK market share statistics are the only data contained in the factsheet that are not explicitly published by other data providers. These UK market share statistics allows users to estimate the importance of UK trade on imports to each trading partner. In the context of the factsheets, reference to UK market share in other *markets* is equivalent to UK market share in other *trading partners*.

UK market share data presented in these factsheets provides an estimate on the proportion of all imports to a market that are sourced from the UK, in other words, the share of the import market the UK accounts for.

Data availability and quality, as detailed in the other sections in this chapter, make it necessary to combine multiple data sources to derive market share. Market share values are calculated as the percentage of UK imports to each trading partner as a proportion of all world imports to that partner. The statistics are calculated using publicly reported data from the [ONS](#) and [UNCTAD](#) datasets.

The derivation of UK market share statistics

UK market share statistics provide percentages on the UK's imports to each trading partner as a proportion of all world imports to that partner. This is derived by the following calculation:

$$\text{UK market share} = \frac{\text{Imports from the UK by trading partner}^1}{\text{Imports from the world by trading partner}^2}$$

¹ Data source: [ONS](#), using data on UK exports by trading partner

² Data source: [UNCTAD](#)

Data from UNCTAD are converted from US dollars into pounds sterling by using the annual average spot exchange rate from the [Bank of England](#) so both datasets are comparable in the same currency. As ONS and the UNCTAD sources provide this information for both goods and services, the factsheets are able to present a total trade market share, as well as 'goods only' and 'services only' market shares – All three market shares are presented in the factsheets where data allows.

UK market share statistics are updated when [ONS](#) release their latest headline quarterly statistics by partner, as well as when [UNCTAD](#) release their latest bi-annual data updates. The statistics are calculated for the latest year common to both datasets, and data from UNCTAD may contain estimated data for the most recent year.

Market share data will be shown as being unavailable if:

- a. there are no data provided for that trading partner in the UNCTAD dataset for the most recent year.
- b. the UK market share is above a tolerance set at 60%. This can occur when small amounts are traded with individual partners and is a result of trade asymmetries between the reporting of UK imports from the UK data source and the reporting of world imports from the trading partner data source. See [Section 5.2](#) for more information on how trade asymmetries can influence trade data.

Data sources used

The UK market share calculation for the numerator uses data on UK exports to that trading partner, as it is the equivalent of imports to that trading partner from the UK. This data on UK exports to each trading partner are provided by [ONS](#) in their quarterly estimates of total trade, trade in goods and trade in services by partner country, which are non-seasonally adjusted. These data are the same as what are presented in the factsheets for UK exports to each trading partner. ONS export data are used instead of import data from the official data providers for each trading partner to ensure these factsheets use data from UK data providers where possible.

Imports from the world by each trading partner is given by UNCTAD using their table on '[Goods and Services \(BPM6\): Exports and imports of goods and services, annual](#)'. Data are updated and revised bi-annually. Please note that UNCTAD do not publish the exact date of their next data update for this data, although it is stated online which month this update will occur in their [release calendar](#). As DBT are unable to predict the exact date of next data update, there may be a time lag between the latest UNCTAD data released, and the UK market share statistics being updated.

More detail on the quality and methodology of the ONS export data can be found in [Section 3.1](#), with more detail on UNCTAD import data from the world in [Section 3.8](#).

3.14 Changes to data sources

DBT strives to provide high quality and transparent statistics that promote understanding and trust. DBT continuously review the factsheets to ensure the statistics provided remain fit for purpose, while reviewing the addition of other publicly available datasets if there are clear needs from our users for their inclusion.

This section reflects changes made to data sources in the Trade and investment factsheets since its first publication in February 2021. This section will be updated as and when existing data sources are changed or removed. Information on the sources currently used in the factsheets can be found in [Chapter 3](#).

3.14.1 Changes to headline trade statistics - Removal of non-seasonally adjusted quarterly trade data

On 27 January 2022, ONS published a new dataset presenting UK trade by each partner market on a seasonally adjusted basis. All factsheets now include seasonally adjusted headline trade statistics from this new ONS '[UK total trade: all countries, seasonally adjusted](#)' quarterly dataset. These headline statistics present the latest rolling four quarters for all partners.

Prior to the 3 February 2022 publication of these factsheets, data were presented on a non-seasonally adjusted basis for most partners, from the ONS '[UK total trade: all countries, non-seasonally adjusted](#)' dataset. The inclusion of seasonally adjusted trade data provides a clearer view of underlying trends that might otherwise be obscured by seasonal influences. The recommendation to replace the non-seasonally adjusted data, following the ONS' development of a new seasonally adjusted dataset, was approved by the Chief Statistician at DBT.

3.14.2 Changes to headline trade statistics - Removal of UK Economic Accounts data

Prior to 24 December 2021, headline quarterly trade statistics for the following partners used data from the ONS release '[Balance of payments, UK](#)': Brazil, Canada, China, Hong Kong SAR, India, Japan, Russia, Switzerland, and the United States. This alternative dataset was previously used to present seasonally adjusted data, where available for specific partners at the time of factsheet release.

Following the first release of the '[UK total trade: all countries, seasonally adjusted](#)' dataset for all trading partners by ONS, see [Section 3.13.1](#) for more information, data from the UK Economic Accounts are no longer presented in the Trade and investment factsheets. The recommendation to not present this data source anymore was approved by the Chief Statistician at DBT. The removal of this dataset ensures consistency for all partners in the data source used for headline trade statistics when comparing across all trading partners.

Note the removal of the [UK Economic Accounts data](#) should not affect trade figures reported as data should remain consistent between these two seasonally adjusted data sources. However, as the UK Economic Accounts dataset is published a few weeks before the [ONS total trade for all partners](#) dataset is published, timelier quarterly trade data between the UK and the list of partners listed above may be found in that release.

3.14.3 Removal of 'ease of doing business' statistics

Since 7 October 2021, the 'ease of doing business' statistics sourced from the World Bank are no longer presented in the Trade and investment factsheets. This is due to the [World Bank discontinuing their 'Doing Business' reports](#) as of 16 September 2021. This decision from the World Bank followed a series of [reviews](#) and [audits](#) which raised concerns over its data quality. The recommendation to remove these statistics from the Trade and investment factsheets was approved by the Chief Statistician at DBT. Historic data can still be found on the [World Bank website](#).

3.14.4 Change of data source for the number of businesses trading goods

Since mid-February 2024, the HMRC publication [UK trade in goods by business characteristics](#) (TGBC) is no longer used as the source of business counts data in the trade and investment factsheets. Business counts data are now sourced from the [UK regional trade in goods](#) (RTS) publication, also published by HMRC.

Reasons for the change in data source include the following:

1. **Coverage:** The RTS data cover a greater number of markets compared to the TGBC data. In data for 2022 published in late 2023, RTS covered 103 markets for exports and 102 for imports, while TGBC covered 42 markets for both exports and imports.
2. **Timeliness:** The RTS business counts data source provides more timely statistics, presenting annual data nine months earlier than the TGBC data.
3. **Coherence:**
 - The RTS data are revised each quarter to ensure coherence with other UK statistics, whereas TGBC data are not revised after they are published.
 - DBT's Core Stats Book uses the RTS to report 'Number of goods exporters and export value by region'. Although this is not the statistic reported in the factsheets, this change aligns the use of the same data source for the number of goods exporters. The factsheets also use the RTS source for the section covering regional exports of goods.

4. Quality assurance for factsheets

This section covers specific issues related to the quality assurance and dissemination of statistics within the [Trade and investment factsheets](#). Note this section does not highlight the quality of each individual data source contained in the factsheets. This is explored in [Chapter 3](#) which provides links to quality reports from individual data providers.

4.1 Quality assurance for the Trade and investment factsheets

Each Trade and investment factsheet is produced via a Reproducible Analytical Pipeline (RAP)⁶. RAP is used to ensure accuracy and consistency throughout the factsheets, as well as to reduce burden within DBT. During this process, DBT ensure that all documents are produced to an [AA accessibility standard](#) in line with [government legislation](#) as demonstrated in [DBT's accessible documents policy](#).

Production of the factsheets is typically carried out by one member of staff, whilst quality assurance is completed by at least one other, to ensure there is an independent assessment of the quality of the outputs. Several checks are undertaken to maintain a high quality and accurate product which correctly represents and matches the data from data providers. The below items show the range of checks that are done during the production process:

1. Checks undertaken before a data release:
 - a. A series of 'test' factsheets are run in the days leading up to a factsheet update to ensure the code is stable and works as intended. Regular testing of the code allows DBT statisticians to resolve any errors far in advance of data release.
 - b. The R code is continuously reviewed to ensure the functions work correctly and are amended, for example, when the functions have been made defunct due to R package updates. Additional validation checks for the R code are also added through a process of continuous development within the statistics team in DBT.
2. Quality checks for downloading data and factsheet creation:
 - a. Firstly, checks are done to ensure the data has been correctly downloaded from the data source website. Any errors are picked up during programmed validation checks, e.g. R identifies errors where the URL link to download the data has been amended compared to previous data updates, or in cases where application programming interfaces (APIs) fail when downloading large quantities of data.
 - b. Following the download of data, manual checks are done to ensure the file is in a similar format to previous data files. These checks include what file format is used, which time periods are being presented, and if there are changes in how figures are presented, e.g. a change in its rounding of figures.
 - c. The R code is then run in segments to update the data used in the factsheets. Running the code in segments means that error warnings are easy to identify.

⁶ Reproducible Analytical Pipelines (RAP) is a methodology for the production of statistical publications, that was developed during a collaboration between the Government Digital Service (GDS) and the Department for Digital, Culture, Media & Sport (DCMS) in 2016. The project aimed to improve the production of a statistical bulletin by introducing techniques from software engineering, data science, and academia. A cross government blog about RAP and data science techniques to improve statistical outputs can be found at: <https://dataingovernment.blog.gov.uk/2017/03/27/reproducible-analytical-pipeline/>.

3. Quality checks on the factsheet outputs:

- a. Once the factsheets are produced in PDF, DBT statisticians check that formatting for all pages is correct and there are no obvious page gaps.
- b. There is some cross checking of figures between older versions of the factsheets – This is done when data has remained unchanged since the previous version, e.g. when updating the factsheets to encompass the ONS quarterly trade data, the HMRC data should remain the same as the previous version.
- c. The updated data are then checked with online sources using a sample of factsheets. These checks confirm if the new statistics are accurate and correctly represent the new data.

Note for these quality checks, DBT check a randomised stratified sample of different partners which have different ranges of data availability. This is to ensure a wide range of factsheets are checked and reviewed for each factsheet publication.

4. Final set of checks before publication:

- d. A random sample of factsheets are checked to ensure they adhere to government accessibility standards, using accessibility testing software (see [Section 2.5](#) for more information on web content accessibility guidelines).
- e. The responsible statistician will then approve the factsheets for publication on GOV.UK at the set time of scheduled release, if it is a planned release.
- f. Once the factsheets are ready to be published, final spot checks are undertaken by the digital team to ensure the correct version are uploaded, and accessibility guidelines have been adhered to.

Quality assurance for UK market share statistics

The UK market share statistics are the only set of statistics in the factsheets which are not explicitly published by other data providers. These statistics are derived by DBT from publicly available [ONS](#) and [UNCTAD](#) datasets, where more information on their derivation can be found in [Section 3.12](#). As these statistics are derived by DBT, a quality assurance process is in place to ensure these statistics are accurately calculated.

The methodology for UK market share has been peer reviewed within DBT to ensure its outputs are accurate and of high quality that meets user needs. UK market share is regularly used within DBT to analyse trends in trade with trading partners over time, as well as to explore potential opportunities for UK trade with certain partners.

The market share statistics are derived in DBT using a model built in Microsoft Excel. The calculations performed in this model takes both datasets, performs the calculations using formula, and omits any data which are not applicable, e.g. where total imports to certain trading partners are unavailable in the UNCTAD dataset. When this model in Excel outputs the latest UK market share statistics, this is identified by the R code and used to output the factsheets with the latest data available for each partner.

The calculations are quality assured in the spreadsheet model using the following checks:

- a. After the raw data from [ONS](#) and [UNCTAD](#) are pasted into the spreadsheet, a number of spot checks are done to ensure the raw data are correctly captured in the spreadsheet formula.
- b. There are two separate spreadsheets which performs these calculations using slightly different formula in Excel. Different members of the statistics team will run both spreadsheets, and the outputs can then be compared between both spreadsheets to ensure the same results are produced. This provides a greater level of assurance in the final statistics to ensure they are accurately calculated.
- c. Further checks are compiled to compare the final factsheet outputs with the outputs from the Excel model. This ensures that the code used to product the factsheets are working as intended and presents the correct statistics.

4.2 Partner market names

To ensure the factsheets reflect the current names recognised by the UK Government for each trading partner, the Foreign, Commonwealth and Development Office (FCDO) [list of approved names for countries and territories](#) is used.

In cases where there has been a recent name change, or names are not recognised globally, there may be differences in the market names included in each dataset presented in the factsheets. DBT have attempted, where possible, to use the International Organization for Standardization ([ISO](#)) codes to ensure the data for each partner are presented consistently. However, comparisons between raw datasets may be more difficult due to these inconsistencies that occur in partner names.

Some examples of differences include Czechia and the Czech Republic (both are recognised names), Ivory Coast (also known as Côte d'Ivoire), as well as differences in smaller partners such as St. Helena (known by FCDOs by the collection of islands of St Helena, Ascension and Tristan da Cunha, but are presented as St. Helena here for consistency with the ONS dataset).

DBT have ensured that the partner names fully reflect the FCDO list of approved names by presenting our list of partner names prior to the first publication of these factsheets in February 2021. These partner names may change over time and DBT will endeavor to present the most recent names in the factsheets at the time of writing.

Factsheets are provided for over 220 individual partners who trade with the UK. This list of partners is based on those reported in the [ONS UK total trade](#) publication (see [Section 3.1](#) for more detail on this dataset). Almost all of the partners in this ONS publication correspond to a Trade and investment factsheet that is published online. While the list of partners we publish factsheets for is extensive, it is not exhaustive. For a small number of partners, where trade with the UK is small in value and limited data are available from other sources, these factsheets are available by contacting statistics@businessandtrade.gov.uk. This list will be reviewed on an annual basis and additional factsheets will be published online if there is a user need.

5. Understanding methods behind trade data

5.1 The influence of non-monetary gold on headline trade statistics

Non-monetary gold is often seen as a 'safe investment' during times of economic uncertainty. In recent years there have been large movements of trade in unspecified goods, the majority of which is (approximately 90%) formed of non-monetary gold. As a result, and because trade in unspecified goods can be volatile, it can mask underlying trends in trade. For example, UK trade in precious metals increased by over 400% during 2019.

Some partners can be significantly affected by trade in unspecified goods, such as Switzerland, Turkey, Russia, the United States, and China. While unspecified goods can have substantial effects on trade trends with certain partners, it is included in the overall totals to ensure international comparability and comply with the UN Balance of Payments Manual ([BMP6](#)), as explained in more detail in an [ONS blog post](#).

Exports of non-monetary gold are not driven by a desire to own physical gold, but as an investment in gold via unallocated gold accounts, which can be considered similar to speculative investment in a currency that you expect to appreciate in value. Non-monetary gold is often seen as a safe haven asset during times of economic uncertainty. More information on non-monetary gold and its effect on trade statistics can found on the [ONS website](#).

5.2 The influence of asymmetries on headline statistics

When goods and services are traded between partners, the transactions are reported twice: once by the exporter and once by the importer. In theory, these values should be identical, but this is rarely the case, and this discrepancy is known as an 'asymmetry'. This is a common issue in trade statistics which means data discrepancies occur between various trade data sources. These asymmetries can occur for several reasons:

- Differences in coverage (i.e. territory classification) and methodology – differences in survey methods and data sources; exclusions of particular types of goods or services; differences in disclosure control rules; differences in the recording of goods sent abroad for processing and repair. An example of this difference is with trade between the UK and the USA where the USA counts Crown Dependencies (the Channel Islands) as trade with the UK, but the UK does not include these Crown Dependencies in their trade figures.
- Valuation differences – differences in methods of estimating value of exports. An example of this difference is European partners mostly use VAT returns to get the value of exports to and imports from the UK. While the UK relies on survey data and estimation which can lead to under or over estimation.
- Differences in the classification of goods/services in Balance of Payments statistics compiled in different partners. An example of this difference is the USA uses the 5th version of the Balance of Payments manual to classify services while the UK uses the 6th version of the Balance of Payments manual.
- Under-reporting or misallocation of trade to a partner.
- Differences in the timing of recording transactions.
- Processing errors, fraudulent declarations etc.

These asymmetries also affect investment statistics too, where the outward FDI stock for the UK may not match the inward FDI stock as reported by the UK's investment partner. Users are advised to use UK data sources such as the ONS where possible when reporting trade and investment statistics with partners. A recent piece of [analysis](#) from the ONS details some of the reasons behind bilateral asymmetries in UK FDI.

For more information, see the ONS [article on asymmetries in trade data](#), as well as the HMRC [article on asymmetries in trade in goods data](#).

5.3 The influence of the 'Rotterdam Effect' on headline trade statistics

Bilateral trade in goods statistics can be affected by transit trade. This is because headline trade in goods data are reported when goods travel between two partners (on an 'immediate basis') rather than reporting when the goods reach their ultimate destination. This ensures the reporting of trade statistics adhere to the recognised international standards.

For example, it is argued that UK trade with the Netherlands, and therefore with the EU, is overstated because:

- a. Many UK exports of goods sent to the port of Rotterdam are for onward supply to partners outside the EU.
- b. Goods imported from the Netherlands may simply be goods that arrived in Rotterdam from other non-EU partners on their way to the UK.

This effect, also known as the 'Rotterdam Effect', is difficult to quantify precisely and any estimates are based on assumptions. ONS analysis published in March 2017⁷ estimated that 50% of UK goods exported to the Netherlands are ultimately destined for non-EU partners (i.e. are re-exported).

The 'Rotterdam Effect' is named as such after this effect for re-exporting in the Netherlands when trade arrives in the port of Rotterdam. However, there are other major re-export hubs around the world which also have this effect on trade statistics, such as Singapore, Hong Kong SAR, and the United Arab Emirates.

⁷ [UK Perspectives 2016: Trade with the EU and beyond](#)

6. Glossary of terms

Term	Description
Balance of Payments	A set of accounts summarising all the transactions of an economy with the rest of the world. See Section 3.2 for more information.
‘Balance of payments’ or ‘change of ownership’ basis	<p>On this basis, a good is recorded as being traded if that economic property changes hands. This means there is a change of ownership between partners even if it may not move physically. An example of this is trade in non-monetary gold, which tends to change economic ownership while still remaining in the same location.</p> <p>The ONS trade in goods data are reported on this basis and are not directly comparable with the HMRC trade in goods data which are based on a ‘physical movement’ basis. All trade in services are reported on a change of ownership basis.</p>
Conversion (or exchange) rate	The conversion rate is the value of one currency for the purpose of conversion to another currency. For the purposes of UK market share statistics (see Section 3.13), figures presented in US dollars are converted into pounds sterling by using the annual average spot exchange rate from the Bank of England .
Directional basis reporting for FDI	<p>These are direct investment flows, outward or inward, as presented by the partner companies in the reporting partner. Directional statistics present FDI from the perspective of the parent company, where any reverse investments to the parent company are subtracted. All FDI statistics presented in the factsheets are on this basis.</p> <p>An alternative way of presenting FDI is on an asset/liability basis. These statistics are organised according to whether the investment relates to an asset or a liability for the investment partner compiling the statistics instead. More information on how the two bases differ can be found on the OECD website.</p>
Domestic value added	In TiVA statistics, this measures the value added generated by the domestic economy in the production of its exports, e.g. the value added by UK car manufacturers and their UK supply chains in car exports. See Section 3.7 for more information.
Exports	Goods and services that were produced or sourced from a country/territory, which were then sold to a trading partner abroad.
Extended Balance of Payments Services (EBOPS) service type codes	The EBOPS is an international classification of service types to compare trade in services throughout the world. These codes are used in the presentation of service types by ONS and ITC Trade Map, in Sections 3.4 and 3.12 respectively. A full list of EBOPS codes which are reported in the factsheet can be found in Annex C .
FDI asymmetries	Discrepancies in bilateral FDI statistics reported by different partners. For example, the value of outward FDI to the United States (as reported by the UK) may not match the value of inward FDI stock to the United States from the UK (as reported by the United States).

Term	Description
FDI stock	The accumulated value of all previous investments at the end of a reference period. Figures are net, that is the value of investment minus disinvestment, and can be negative. FDI stock figures reported in the factsheets are on a directional basis, see above for a definition.
Foreign Direct Investment (FDI)	Investments made by a firm or individual in one economy ('direct investor') to acquire a 'lasting interest' in an enterprise operating in another economy. The lasting interest is deemed to exist if the direct investor acquires at least 10% of equity, or equivalently 10% of the voting rights, of the company.
Foreign value added	In TiVA statistics, this measures the value-added contribution that foreign suppliers make to these exports, e.g. the import of foreign car parts. See Section 3.7 for more information.
Global value chains (GVCs)	Global value chains refer to international production sharing. This occurs when different stages of the production process are carried out by different partners, such as when parts of a final product are produced by another partner overseas.
Goods trade	Trade of tangible items, such as raw materials or products.
Gross Domestic Product (GDP)	GDP is the final value of the goods and services produced in the context of this factsheet for an individual partner. GDP growth rate is an important indicator of the economic performance of a market. Metrics on GDP are provided in the dataset from the International Monetary Fund (IMF), see Section 3.10 for more information.
Harmonized System (HS) commodity codes	The HS is an international classification of good commodities for the purposes of economic analysis and to facilitate the international comparison of trade-by-commodity data. HS codes are used in the presentation of trade in goods in the statistics from UN Comtrade, as detailed in Section 3.11 , where the Standard International Trade Classification (SITC) is used instead in other datasets such as those from the ONS. A full list of HS codes which are reported in the factsheet can be found in Annex B .
Imports	Goods and services that were bought by a country/territory, which were produced or sourced from a trading partner abroad.
Inflation	The rate at which prices for goods and services increase or decrease over time.
Interdepartmental Business Register (IDBR)	The IDBR is a comprehensive list of UK businesses used by government for statistical purposes. More information on the IDBR can be found on the ONS website .
Inward FDI stock	The FDI stock which provides the total investment of overseas economies for the reporting partner.
Nominal (or current) prices	These are the prices at which goods and services were sold in the market at that time. This means no adjustments for inflation are made for that data.

Term	Description
Outward FDI stock	The FDI stock which provides the total investment in economies overseas by the reporting partner.
Partner	An individual country/territory which the UK trades/invests with.
'Physical movement' basis	<p>On this basis, a good is recorded as being traded if it moves between the partners' borders. This means there is a physical movement of that good between the trading partners, even if there is not a change in ownership. An example of this is trade in art which tends to be traded overseas so it can be displayed publicly, but still remains the property of another partner.</p> <p>The HMRC regional trade in goods data are reported on this basis and not directly comparable with the ONS trade in goods data which are based on a 'balance of payments' basis.</p>
Real (or constant) prices	A real price is one which has been adjusted for inflation, enabling comparisons over time as if the prices of goods had not changed on average. This means adjustments for inflation have been made for that data.
Regional trade in the UK	The UK is categorised into 12 regions, which are Wales, Scotland, Northern Ireland, and the following 9 English regions: North East, North West, Yorkshire & the Humber, East Midlands, West Midlands, East of England, London, South East, and South West. These UK regions are based on the <i>Nomenclature of Territorial Units for Statistics</i> references as defined by Eurostat as NUTS1 regions. See Section 3.5 for more information.
Seasonal adjustment	<p>The purpose of seasonal adjustment is to remove systematic calendar-related variation associated with particular times of the year. The removal of these seasonal effects facilitates more statistically robust comparisons between consecutive time periods. Seasonal effects can be influenced by weather patterns; administrative measures; social, cultural and religious events; variation in the length of months and quarters; number of trading days in a month; and moving holidays such as Easter and Ramadan.</p> <p>It is advised not to compare seasonally and non-seasonally adjusted data unless it is for a full calendar year where seasonally and non-seasonally adjusted data will be equivalent. More information on this methodology on ONS statistics can be found on the ONS website.</p>
Services trade	Trade of intangible products, such as business or travel industries.

Term	Description
Standard International Trade Classification (SITC) commodity codes	The SITC is an international classification of good commodities for the purposes of economic analysis and to facilitate the international comparison of trade-by-commodity data. SITC codes are used in the presentation of trade in goods in the statistics from ONS, as detailed in Section 3.3 , where the Harmonized System is used instead in other datasets. SITC covers all of the goods classifiable in the Harmonized System (HS), except for trade in monetary gold and gold coins. A full list of SITC codes which are reported in the factsheet can be found in Annex A .
Total or 'bilateral' trade	The value of total trade between two partners, calculated as exports plus imports.
Trade asymmetries	Discrepancies in bilateral trade statistics reported by different partners. For example, the value of UK exports to the United States (as reported by the UK) may not match the value of United States imports from the UK (as reported by the United States).
Trade balance	The difference in value between exports and imports, calculated as exports minus imports.
Trade deficit	Occurs when the value of imports exceeds that of its exports, i.e. when its trade balance is negative.
Trade in Value Added (TiVA)	TiVA is a statistical approach to examine supply chains, which is not possible with conventional trade statistics. This is because TiVA treats international trade flows as flows of value added rather than gross flows of final goods and services. This is done by decomposing exports into the value added domestically and value added overseas. See Section 3.7 for more information.
Trade surplus	Occurs when the value of exports exceeds that of its imports, i.e. when its trade balance is positive.
UK market share	These statistics allows users to estimate the influence of UK trade on imports to each trading partner. It is calculated as the proportion of imports from the UK as a percentage of all the goods and services imported by that trading partner. The statistics are derived by the Department for International Trade from publicly available data from the ONS and UNCTAD and are not published elsewhere. See Section 3.13 for more information.
VAT-registered business	Any company with a taxable turnover of more than £85,000 must be registered for Value Added Tax (VAT) with HM Revenue & Customs (HMRC).

7. Annexes

Annex A - List of SITC codes presented in the ONS trade by commodity data

A full list of all Standard International Trade Classification (SITC) codes can be found on the [United Nations website](#). Please note that DBT present data in the factsheets at the lowest level of disaggregation available in the ONS dataset, although ONS provide data on all levels in each commodity's hierarchy. Within the ONS dataset, some codes have been aggregated up and therefore user should take care when using these data to avoid double counting.

As an example, in the ONS dataset, SITC: 7EC, 7EI, 7EK, 8OC, 8OI and 8OK are aggregates i.e.

- $7EC = 75C + 76C + 77C$
- $7EI = 71EI + 75I + 76I + 77I$
- $7EK = 71EK + 75K + 76K + 77K$
- $8OC = 81C + 82C + 83 + 89OC$
- $8OI = 81I + 82I + 89I$
- $8OK = 81K + 82K + 89K$

Code	Description of commodity
00	Live animals
01	Meat & meat preparations
02	Dairy products & eggs
03	Fish & shellfish
04	Cereals
05	Vegetables & fruit
06	Sugar
07	Coffee, tea, cocoa etc.
08	Animal feeding stuffs
09	Miscellaneous foods
11	Beverages
12	Tobacco
21	Hides, skins & furskins
22	Oil-seeds & oleaginous fruits
23	Crude rubber
24	Wood & cork
25	Pulp & waste paper
26	Textile fibres
27	Crude minerals & fertilisers
28	Metal ores & scrap
29	Other crude animal & vegetable materials
32	Coal, coke & briquettes
33O	Crude oil
33R	Refined oil
34	Gas
35	Electricity
41	Animal oils & fats
42	Vegetable oils & fats
43	Processed oils & fats
51	Organic chemicals
52	Inorganic chemicals
53	Dyeing, tanning & colouring materials
54	Medicinal & pharmaceutical products
55	Toilet & cleansing preparations
56	Processed fertilisers

Code	Description of commodity
57	Plastics in primary forms
58	Plastics in non-primary forms
59	Other chemicals
61	Leather manufactures
62	Rubber manufactures
63	Wood & cork manufactures
64	Paper & paperboard
65	Textile fabrics
66	Mineral manufactures
67	Iron & steel
68	Non-ferrous metals
69	Miscellaneous metal manufactures
71EI	Electric motors (intermediate)
71EK	Electric motors (capital)
71MC	Mechanical power generators (consumer)
71MI	Mechanical power generators (intermediate)
71MK	Mechanical power generators (capital)
72C	Specialised machinery (consumer)
72I	Specialised machinery (intermediate)
72K	Specialised machinery (capital)
73I	Metal working machinery (intermediate)
73K	Metal working machinery (capital)
74C	General industrial machinery (consumer)
74I	General industrial machinery (intermediate)
74K	General industrial machinery (capital)
75C	Office machinery (consumer)
75I	Office machinery (intermediate)
75K	Office machinery (capital)
76C	Telecoms & sound equipment (consumer)
76I	Telecoms & sound equipment (intermediate)
76K	Telecoms & sound equipment (capital)
77C	Miscellaneous electrical goods (consumer)
77I	Miscellaneous electrical goods (intermediate)
77K	Miscellaneous electrical goods (capital)
78C	Road vehicles other than cars (consumer)
78I	Road vehicles other than cars (intermediate)
78K	Road vehicles other than cars (capital)
78M	Cars
791I	Railway equipment (intermediate)
791K	Railway equipment (capital)
792	Aircraft
793	Ships
81C	Plumbing, heating & lighting fixtures (consumer)
81I	Plumbing, heating & lighting fixtures (intermediate)
81K	Plumbing, heating & lighting fixtures (capital)
82C	Furniture (consumer)
82I	Furniture (intermediate)
82K	Furniture (capital)
83	Travel goods, handbags etc.
84	Clothing
85	Footwear
87C	Scientific instruments (consumer)
87I	Scientific instruments (intermediate)
87K	Scientific instruments (capital)
88C	Photographic & optical goods & clocks (consumer)
88I	Photographic & optical goods & clocks (intermediate)
88K	Photographic & optical goods & clocks (capital)
89I	Other manufactures (intermediate)
89K	Other manufactures (capital)
89OC	Other manufactures (consumer)
896	Works of art
897C	Jewellery

Code	Description of commodity
9	Unspecified goods

'9 - Unspecified goods' includes precious metals, parcel post, low value trade, coins, and defense equipment; Approximately 90% of all goods in this unspecified goods category are known to be non-monetary gold and may have a significant influence on overall trade trends for some trading partners.

Consumption goods are those goods that are used directly by their final consumers, e.g. food, cars. **Intermediate** goods are those goods which are not used directly by final consumer but are necessary for manufacturing of the final goods, e.g. salt in food production, car engines. **Capital** goods are those goods which help in manufacturing of consumption or intermediate goods, e.g. machinery, tools.

Annex B – List of HS2 codes presented in the UN Comtrade trade by commodity data

A full list of all Harmonized System (HS) codes can be found on the [United Nations website](#).

Code	Description of commodity
01	Animals; live
02	Meat and edible meat offal
03	Fish and crustaceans, molluscs and other aquatic invertebrates
04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included
05	Animal originated products; not elsewhere specified or included
06	Trees and other plants, live; bulbs, roots and the like; cut flowers and ornamental foliage
07	Vegetables and certain roots and tubers; edible
08	Fruit and nuts, edible; peel of citrus fruit or melons
09	Coffee, tea, mate and spices
10	Cereals
11	Products of the milling industry; malt, starches, inulin, wheat gluten
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit, industrial or medicinal plants; straw and fodder
13	Lac; gums, resins and other vegetable saps and extracts
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included
15	Animal or vegetable fats and oils and their cleavage products; prepared animal fats; animal or vegetable waxes
16	Meat, fish or crustaceans, molluscs or other aquatic invertebrates; preparations thereof
17	Sugars and sugar confectionery
18	Cocoa and cocoa preparations
19	Preparations of cereals, flour, starch or milk; pastrycooks' products
20	Preparations of vegetables, fruit, nuts or other parts of plants
21	Miscellaneous edible preparations
22	Beverages, spirits and vinegar
23	Food industries, residues and wastes thereof; prepared animal fodder
24	Tobacco and manufactured tobacco substitutes
25	Salt; sulphur; earths, stone; plastering materials, lime and cement
26	Ores, slag and ash
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes
28	Inorganic chemicals; organic and inorganic compounds of precious metals; of rare earth metals, of radio-active elements and of isotopes
29	Organic chemicals
30	Pharmaceutical products
31	Fertilizers
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints, varnishes; putty, other mastics; inks
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations
34	Soap, organic surface-active agents; washing, lubricating, polishing or scouring preparations; artificial or prepared waxes, candles and similar articles, modelling pastes, dental waxes and dental preparations with a basis of plaster
35	Albuminoidal substances; modified starches; glues; enzymes

Code	Description of commodity
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations
37	Photographic or cinematographic goods
38	Chemical products n.e.c.
39	Plastics and articles thereof
40	Rubber and articles thereof
41	Raw hides and skins (other than furskins) and leather
42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut)
43	Furskins and artificial fur; manufactures thereof
44	Wood and articles of wood; wood charcoal
45	Cork and articles of cork
46	Manufactures of straw, esparto or other plaiting materials; basketware and wickerwork
47	Pulp of wood or other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard
48	Paper and paperboard; articles of paper pulp, of paper or paperboard
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans
50	Silk
51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric
52	Cotton
53	Vegetable textile fibres; paper yarn and woven fabrics of paper yarn
54	Man-made filaments; strip and the like of man-made textile materials
55	Man-made staple fibres
56	Wadding, felt and nonwovens, special yarns; twine, cordage, ropes and cables and articles thereof
57	Carpets and other textile floor coverings
58	Fabrics; special woven fabrics, tufted textile fabrics, lace, tapestries, trimmings, embroidery
59	Textile fabrics; impregnated, coated, covered or laminated; textile articles of a kind suitable for industrial use
60	Fabrics; knitted or crocheted
61	Apparel and clothing accessories; knitted or crocheted
62	Apparel and clothing accessories; not knitted or crocheted
63	Textiles, made up articles; sets; worn clothing and worn textile articles; rags
64	Footwear; gaiters and the like; parts of such articles
65	Headgear and parts thereof
66	Umbrellas, sun umbrellas, walking-sticks, seat sticks, whips, riding crops; and parts thereof
67	Feathers and down, prepared; and articles made of feather or of down; artificial flowers; articles of human hair
68	Stone, plaster, cement, asbestos, mica or similar materials; articles thereof
69	Ceramic products
70	Glass and glassware
71	Natural, cultured pearls; precious, semi-precious stones; precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin
72	Iron and steel
73	Iron or steel articles
74	Copper and articles thereof
75	Nickel and articles thereof
76	Aluminum and articles thereof
78	Lead and articles thereof
79	Zinc and articles thereof
80	Tin; articles thereof
81	Metals; n.e.c., cermets and articles thereof
82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof, of base metal
83	Metal; miscellaneous products of base metal
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles
86	Railway, tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipment of all kinds
87	Vehicles; other than railway or tramway rolling stock, and parts and accessories thereof
88	Aircraft, spacecraft and parts thereof
89	Ships, boats and floating structures

Code	Description of commodity
90	Optical, photographic, cinematographic, measuring, checking, medical or surgical instruments and apparatus; parts and accessories
91	Clocks and watches and parts thereof
92	Musical instruments; parts and accessories of such articles
93	Arms and ammunition; parts and accessories thereof
94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, n.e.c.; illuminated signs, illuminated name-plates and the like; prefabricated buildings
95	Toys, games and sports requisites; parts and accessories thereof
96	Miscellaneous manufactured articles
97	Works of art; collectors' pieces and antiques
99	Commodities not specified according to kind

'n.e.c.' is an acronym for "not elsewhere classified".

Annex C – List of EBOPS codes presented in the ONS and ITC Trade Map trade by services type data

A full list of all Extended Balance of Payments Services (EBOPS) codes can be found on the [United Nations website](#).

Code	Description of service type
1	Manufacturing
2	Maintenance and repair
3	Transportation
4	Travel
5	Construction
6	Insurance and pension
7	Financial
8	Intellectual property
9	Telecommunications, computer and information services
10	Other business services
11	Personal, cultural and recreational
12	Government

'10 - Other business services' includes professional, management consulting, technical and trade related services.