

# Trade in services asymmetries – the challenges of measuring imports and exports

This article focusses on the challenges of measuring trade in services and some of the known reasons for and causes of the related asymmetries.

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# 1 . Main points

- “Trade asymmetries” is a concept in trade statistics where the credits (exports) and debits (imports) that each partner country records do not match.
- This article focusses on the challenges of measuring trade in services and some of the known reasons for and causes of the related asymmetries.
- The Office for National Statistics (ONS) uses internationally agreed guidance and methodological standards for preparing trade statistics. These support the production of high-quality data and enhance international comparability and consistency.
- While countries follow such guidance, the measurement of international trade flows and relationships is complex. There are also conceptual and measurement differences across countries.
- We continue to increase our understanding of asymmetries through data analysis, alongside international engagement and collaboration, and to put steps in place to reduce asymmetries; the work on asymmetries feeds into a wider programme of development and quality improvements to our trade statistics.

## 2 . International trade statistics

Our [international trade statistics](#) provide an estimate of the UK's international trade in goods and services with the rest of the world. These include total imports and exports, as well as a breakdown by country and by goods or service type.

These trade statistics are produced to help inform the development of trade and investment policy, and decision-making by both government and business.

The [United Nations' Balance of Payments and International Investment Position Manual](#), currently Version 6 (BPM6), provides and explains concepts, definitions, classifications and related conventions for preparing statistics on the transactions and positions between a country's economy and the rest of the world to agreed methodological standards. This guidance helps to support the production of high-quality data and enhances international comparability and consistency.

All countries that produce trade statistics will have their own estimation practices, meaning there will be methods and collection differences across countries.

### 3 . What are trade asymmetries?

When goods and services are traded (imported and exported) between countries, the transactions are reported twice: once by each country in the bilateral relationship. Simplistically, the credits (exports) and debits (imports) that each country records should be identical. For example, France's estimate of its imports from the UK should in theory match the UK's estimate of its exports to France. However, this is rarely the case and the difference in the two statistics is known as an "asymmetry".

Asymmetries in trade statistics are a global phenomenon – they exist across international trade statistics and are an issue for each country. The measurement of international trade flows and relationships is complex, and asymmetries are an inevitable consequence of this.

Our previous work has found that UK import asymmetries tend to be larger (in size) than UK export asymmetries for trade in services. By size, the most substantial asymmetries tend to be observed in the service types "Financial services", "Other business services" and "Telecommunications, computer & information services". Our previous [Asymmetries in trade data: updating analysis of UK bilateral trade data](#) article provides more information on the pattern of asymmetries we have found.

Reducing asymmetries requires working together as an international community to continue to implement best practice, discuss these differences, develop further understanding and implement improvements by all statistical partners involved in the trade flows.

### 4 . UK trade in services data

UK trade in services statistics are derived from a variety of sources, though the International Trade in Services (ITIS) Survey is the main source of these data. Data from the ITIS survey provide over 50% of trade in services data. The survey is administered by the Office for National Statistics (ONS), which also leads the research on trade in services asymmetries.

The [International Trade in Services \(ITIS\) survey](#) collects quarterly and annual data from UK businesses to provide statistics on both the UK's services imports and exports. Information on 52 different types of services by country of origin and destination is collected. The survey provides information on trade between the UK and over 200 countries worldwide. The survey's selection criteria requires respondents to be UK trading businesses, which are registered for Value Added Tax (VAT) and/or PAYE. ITIS data are based on a quarterly sample of approximately 2,200 businesses and an annual sample of approximately 22,500 businesses. The annual results are supplemented by information collected through the Annual Business Survey (ABS). The data are used to compile the trade in services current account of the balance of payments and the trade in services component within the expenditure measure of [gross domestic product \(GDP\)](#).

More information about UK trade data, the quality characteristics of the data, and the methods used to create the data can be found in the Quality and Methodology Information (QMI). The QMI accompanies our respective data releases: [The UK Trade Quality and Methodology Information](#) and the [International Trade in Services Quality and Methodology Information](#).

### 5 . Reasons for asymmetries in trade in services

This section focusses on the challenges of measuring trade in services and some of the known reasons for and causes of the related asymmetries.

It is important to note asymmetries can be created through a number of small, often interacting factors. This makes it difficult to assess the impact of any specific cause or difference.

## Difficulty of measuring imports compared with exports

National statistics institutes and data compilers generally agree that it is easier to collect responses from companies that export than those that import. This is particularly true for trade in services, where surveys are the primary source of information, and identifying importers can be difficult. This is the case for many statistical producers and this tendency for import statistics to be more challenging to collect than export statistics increases the chances of asymmetries between country estimates.

## Differences in methodology and coverage

Most countries use surveys to measure trade in services and will inevitably adopt different approaches and methods for their sampling frame, coverage or sample size. These factors can all contribute to the size of the asymmetries between countries.

For example, some countries may apply a threshold, where a company is only included in the survey sample if they meet a certain monetary value of trade. This value can vary between countries, and some countries may not apply such a threshold. Another difference could be the application of a company size threshold, where a company is only included in the sample if, for example, they meet a certain employment count. This was previously the case for the collection of UK trade statistics through the International Trade in Services Survey (ITIS), which excluded microbusinesses (those with an employment count below 10). From 2020 collection onwards, the sample for the annual ITIS has been expanded to include microbusinesses. For more information see our [International trade in services, overview of methods changes: 2020](#). There may also be differences across countries in imputation methods for reconciling missing data or disclosure control rules.

Other countries may use non-survey or administrative data to produce their trade statistics. Alternatively, a survey approach may be supplemented with other data sources, such as, tax or customs records, if available. For example, Statistics Netherlands (CBS) utilise the [European Union Value Added Tax Information Exchange System \(VIES\)](#) data to help inform their [international trade in services statistics](#) and related sampling frame for the inclusion of enterprises that import and export services. It is worth noting that the availability of non-survey or administrative data may vary across countries.

## Structure of multi-national companies

Many large, multi-national companies have complicated corporate structures, which can make identifying the correct company to include in a sample very challenging. Some companies may use small subsidiaries to carry out specific actions, such as international trade, which can be hard to identify in a large sampling frame, though these small companies can account for large trade volumes. If these activities are accounted for in one country's data and not in another country's data, an asymmetry may arise.

## Differences in questions and question guidance

Where trade in services estimates are derived from surveys, the questions and question guidance provided to respondents can differ across countries. For example, questions may vary slightly, or response options to a question may not be consistent. Also, the guidance provided to help answer the question could differ, for example, the information it suggests should, or should not be included as part of the response could vary between countries. Such differences may exist because countries interpret the Balance of Payments Manual, sixth edition (BPM6) guidance in different ways, which in turn influences how they design their survey questions and question guidance. Differences may also occur because of the translation of questions or guidance from one language to another. This means that the data being collected across countries may vary slightly and, as such, may not be fully comparable; these differences ultimately affect asymmetries.

## Differences in the classification of items within the accounts

While there are internationally agreed, standard classifications of service types, they may be interpreted and/or implemented differently across countries. For example, a country may adopt its own classification if it believes that the classification better captures an aspect of an industry or sector it is trying to measure, or where there is currently no guidance on how to capture certain types of services (for example, digitally delivered trade). These differences can affect the size of asymmetries as a result of services being classified in different areas of the accounts. The "total" level of the value should not be affected substantially as the service should still be represented in the account, though which service category it sits within may differ.

## Digitally delivered trade, including streaming services

As more activity, including trade, is conducted digitally, there is added complexity when attempting to measure international trade. For example, it can be challenging to identify where streaming services are being provided and /or billed from. Work is being led by the Organisation for Economic Co-operation and Development (OECD) to define international guidance on a consistent approach for measuring trade in digital services. We have contributed to work in this area and produced [experimental estimates of aspects of UK digital trade in our Digital Trade, UK: 2020 article](#), compiled using existing trade data sources.

## Differences in territorial definitions

Different countries may apply different territorial definitions when estimating their trade flows. For example, in line with the [European System of Accounts – ESA 2010](#) update to definitions, concepts and classifications, the Office for National Statistics (ONS) does not include Crown Dependencies (Jersey, Guernsey and Isle of Man) in UK estimates. However, the US Bureau of Economic Analysis (BEA) includes the Crown Dependencies in its definition of the UK in producing trade statistics. Such differences in territorial definitions are likely to lead to trade asymmetries, as trade values will be allocated to different countries if they do not follow the same definitions.

## Exchange rate conversion

To produce trade statistics, data in different currencies must be converted to one country-specific currency (for example in Pound Sterling to obtain UK asymmetries in GBP). Exchange rates are used for such conversion exercises. However, exchange rates can be volatile and in years where volatility is higher, there could be a potential increase in the discrepancies between countries' statistics.

## Revisions to data

The UK and many countries worldwide make regular revisions to their trade statistics. A revision is a change to any official statistic once it has been placed in the public domain. Revisions can include updates to incorporate better or more complete source data, updates to capture routine recalculations, such as the incorporation of updated [seasonal adjustment factors \(as explained on our webpage\)](#), and changes in statistical methods. Data revisions help to provide more complete information and to improve the quality of the data, so are important. Data producers will make revisions based on their country-specific needs, which means timings of revisions are likely to differ across countries. This moving picture of the data is an added challenge to calculating and understanding the size of an asymmetry and its cause.

## 6 . Trade in goods statistics and asymmetries

HM Revenue & Customs (HMRC) collects the UK's international trade in goods data, which are published as two National Statistics series – the Overseas Trade Statistics (OTS) and the Regional Trade Statistics (RTS). The OTS are published monthly in simultaneous releases for Non-EU and EU trade, and include import and export trade values by summary product and partner country. The RTS are published quarterly showing trade at summary product and country level, split by UK regions and devolved administrations. HMRC also leads research on asymmetries in this area.

For more information, please see the following HMRC content on the GOV.UK website:

- [UK trade in goods statistics on GOV.UK](#) provides UK overseas trade statistics and regional trade statistics at summary product and country level, and by UK regions and devolved administrations
- [Overseas trade statistics: methodologies](#) covers all aspects of the overseas trade statistics and regional trade statistics methodologies
- [UK Trade in Goods Statistics Methodology Statement: Overview of Asymmetries \(PDF, 192KB\)](#) details the reasons for differences in trades in goods data across countries, international comparability of the data and an overview of some of the analytical work carried out by HMRC to quality assure the data
- [UK trade asymmetries](#) covers the trade asymmetries in international trade in goods statistics for both EU Member States and non-EU countries

## 7 . Developing UK trade and investment statistics with a focus on asymmetries

We are committed to producing high-quality, informative, internationally comparable trade statistics. We continue to undertake extensive work to help inform, understand and reduce (where possible), our asymmetries in trade in services.

Our approach has been two-fold and complimentary and involves:

- undertaking analysis of trade in services data to identify, understand and explain where the largest UK import asymmetries with trading partners are, with a focus on service types
- engaging with other countries to understand more about why these asymmetries may occur

While it is not possible to remove asymmetries altogether, the key to addressing asymmetries is the requirement for the international community to work together as this issue is of relevance to us all. National statistical institutes, including the ONS, central banks and other compilers of trade statistics continue to work closely together to better understand differences between our trade data and reduce asymmetries. The Office for National Statistics (ONS) is proactively engaging with bilateral partners and participating in multilateral country discussions and work.

The ONS, on behalf of the UK, has been instrumental in establishing an international group to focus on asymmetries. The group was proposed via the Working Party on International Trade in Goods and Services (WPTGS Bureau) in late 2021, which led to the creation of the "OECD [Organisation for Economic Co-operation and Development] Informal Experts Group on Trade in Services Compilation and Asymmetries". The role of the group is to bring together experts from across the globe to collaborate on international trade in services asymmetries by sharing best practice and identifying the most relevant causes of asymmetries. The aim is that this shared understanding will help fellow country members to improve the quality of their trade data and ultimately reduce the observed asymmetries. Over 20 national statistics institutes, central banks or data compilers are members of the Group.

Our work on asymmetries feeds into the ongoing transformation and developments to our UK trade and investment statistics. For example, a decision was made to include microbusinesses in the annual International Trade in Services (ITIS) survey to improve coverage of UK trade in services statistics. See [International trade in services, overview of methods changes: 2020](#) for more information.

An overview of further development work that the ONS has planned can be found in our latest [UK trade and investment development plans update: achievements and forward look, October 2022](#) release. An important milestone for the improvements to trade in services statistics will be the addition of the transport sector to the ITIS survey. Adding transport-specific questions to ITIS, where specific transport-related businesses are targeted, will ensure this sector gains broader coverage with a higher, more consistent response rate that will enhance existing services statistics. This development is ongoing, and we will communicate this work as part of our regular Blue Book development process.

## 8 . Glossary

### The Balance of Payments Manual, sixth edition (BPM6)

Compiled by the International Monetary Fund, the Balance of Payments Manual, sixth edition, published in 2009 updates the fifth edition, published in 1993. It serves as the standard framework for statistics on the transactions and positions between an economy and the rest of the world.

### Exports

Goods or services sold to other countries; the opposite of imports.

## **Gross domestic product (GDP)**

Gross domestic product is a measure of the size of the economy.

## **Imports**

Purchases of foreign goods and services; the opposite of exports.

## **Seasonal adjustment (SA)**

Where the seasonal or calendar effects have been removed from a series so that comparisons can be made from month to month, all year.

## **Trade in goods**

Trade in goods covers general merchandise, goods for processing, repairs on goods, goods procured in ports by carriers and commodity gold. General merchandise is defined for balance of payments purposes as covering, with a few exceptions, all movable goods for which actual or imputed changes of ownership occur between residents and non-residents.

## **Trade in services**

Provision of services between UK residents and non-residents and transactions in goods which are not freighted out of the country in which the transactions take place, for example purchases for local use by foreign forces in the UK and by UK forces abroad, and purchases by tourists. Transactions in goods, which are freighted into and out of the UK, are included under trade in goods.

## 9 . Related links

### [Asymmetries in trade data: updating analysis of UK bilateral trade data](#)

Article | Released 21 February 2020

Update on UK trade data asymmetries with select partner countries for 2016 to 2018, including recent source and methods changes and work to better understand and reduce UK trade asymmetries.

### [Asymmetries in trade data: extending analysis of UK bilateral trade data](#)

Article | Released 30 August 2018

This article takes a deep dive into understanding the methods and sources behind bilateral trade data asymmetries for selected priority countries, including the United States, Ireland, France and Germany.

### [Asymmetries in trade data - diving deeper into UK bilateral trade data](#)

Article | Released 30 August 2018

This article takes a deep dive into understanding the methods and sources behind bilateral trade data asymmetries.

### [A global balancing act – exploring the asymmetries in world trade data](#)

Blog post | Released 30 August 2018

Statisticians and trade negotiators have been scratching their heads to explain a phenomenon called "trade asymmetries", where different countries' estimates of trade with each other do not match. Adrian Chesson writes about ONS's latest work, in collaboration with our bilateral partners such as the US and the Republic of Ireland, to explain some of the differences between the UK's trade data and those of its biggest trading partners.

### [Asymmetries in Trade Data - A UK Perspective](#)

Article | Released 13 July 2017

A summary of UK Trade Asymmetries in a global context with a description of known reasons for asymmetries, ongoing work and future plans to reduce the asymmetries.

### [Measuring trade – why does the world seem to import more than it exports?](#)

Blog post | Released 18 July 2017

With complex international trade negotiations in prospect for the UK, Jonathan Athow explains how the Office for National Statistics (ONS) is addressing the asymmetries in global trade statistics.

## 10 . Cite this methodology

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