

Article

Developing UK digital trade statistics

An introduction to digital trade and plans to develop estimates.

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1 . Overview of digital trade research

- Digitalisation is now everywhere but remains largely invisible within current trade statistics.
- An important development in digital trade is the increasing role of digital intermediary platforms, which enable transactions between multiple buyers and multiple sellers.
- Initial research is under way and we are aiming to produce the first experimental digital trade estimates later in 2022.

2 . Introduction to digital trade

The digitalisation of goods and services is one of the defining economic changes of the late 20th and early 21st century. Measuring the extent to which the digital revolution has changed the face of the economy and the ways humanity engages with technology, goods and services has been one of the main priorities of the Office for National Statistics (ONS) since the publication of the [Bean Review](#) in 2016. This article summarises numerous strands of research work related to the development of digital trade estimates.

The growth of the internet has transformed trade – providing access to global markets that were not previously possible in a non-digital world, the introduction of electronic ordering and delivery of goods and services, and new products such as cloud services and e-books.

This article covers:

- the definition of digital trade
- the challenges with measuring platforms that enable digital trade
- the development plans, which include producing experimental digital trade estimates later in 2022

The Organisation for Economic Co-operation and Development (OECD) defines digital trade as all trade that is digitally ordered and/or digitally delivered, where:

- digitally ordered trade is the international sale or purchase of a good or service, conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders
- digitally delivered trade is international transactions that are delivered remotely in an electronic format, using computer networks specifically designed for the purpose

Under this definition goods can only be digitally ordered while services can be digitally ordered, digitally delivered, or both digitally ordered and digitally delivered.

Digitalisation is now everywhere but remains largely invisible within current trade statistics. [Modes of supply statistics](#) were developed by the ONS in 2019, which break down trade in services by:

- Mode 1: Remote trade
- Mode 2: Consumption abroad
- Mode 3: Commercial presence
- Mode 4: Presence of natural persons

Remote trade (Mode 1) provides an upper-bound estimate of digitally delivered trade in services, with 82.1% and 71.8% of total exports and imports of services respectively being remotely supplied in 2020. However, there are currently no estimates available of digitally ordered trade in goods or services.

Digitally ordered trade covers orders made over the internet (including access by mobile devices), extranet or via electronic data interchange (EDI); excluded are orders made by phone, fax or manually typed email. The payment and ultimate delivery of the goods or services do not also have to be conducted online.

3 . Digital intermediary platforms

An important development in digital trade is the increasing role of digital intermediary platforms (DIPs), such as Airbnb, Amazon, Booking.com and eBay, which enable the purchase of goods and services.

The Organisation for Economic Co-operation and Development (OECD) defines DIPs as "online fee-based intermediation services enabling transactions between multiple buyers and multiple sellers, without the intermediation platform taking economic ownership of the goods or rendering services that are being sold". Fees to use the intermediary can be charged to the buyer, seller or both.

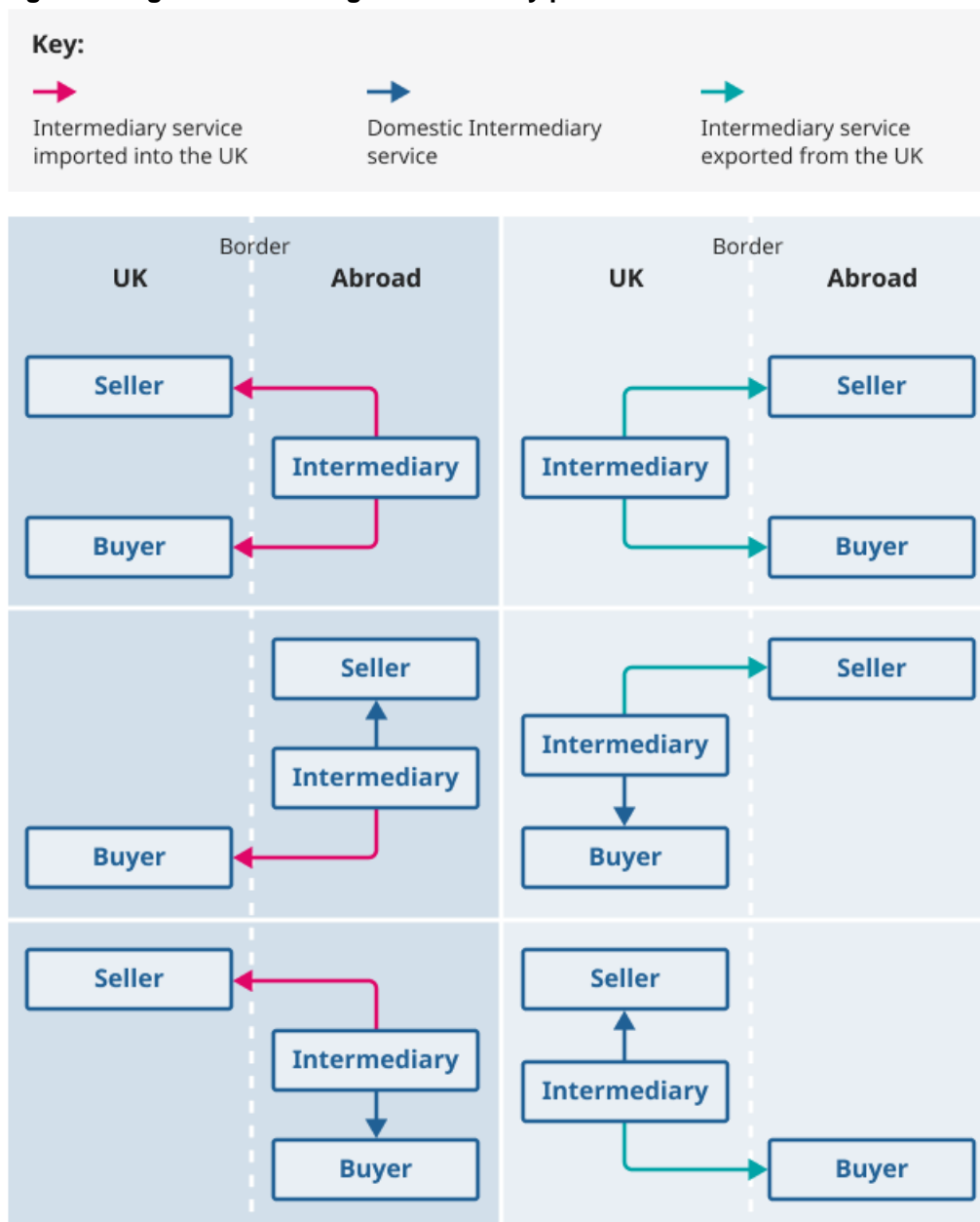
In practice, very few countries are able to identify DIPs in their economy, with even fewer being able to identify payments to non-resident DIPs. This partly reflects a lack of clear guidance in how they should be classified in the [International Standard Industrial Classification \(PDF, 1.06MB\)](#). While discussions are ongoing in this area, the [current guidance from the UN Expert Group on Industrial Classifications \(PDF, 225KB\)](#) is that DIPs that intermediate the provision of services should be classified to the product in which they intermediate, and those that intermediate the provision of goods should be classified to retail trade.

DIPs also need to be distinguished from electronic retailers who may sell a wide variety of products and operate exclusively online, but who own all of the products being sold. It is also possible that these two business models may exist within the same enterprise group.

When DIPs have been identified, the residency of the buyer, seller and DIP needs to be considered to identify whether the intermediation fee constitutes as trade. For example, goods or services purchased by a UK buyer from a UK seller are considered a domestic transaction, however, when the transaction is enabled by a non-UK DIP, the intermediation fee should be captured as a services import.

Similarly, goods or services purchased by a non-UK buyer from a non-UK seller are not recorded in UK trade statistics, however, when the transaction is enabled by a UK DIP, the intermediation fee should be captured as a services export. Figure 1 shows the cases when an intermediation fee is exported and imported based on the residence of the buyer, seller and intermediary.

Figure 1: Digital trade through intermediary platforms



Source: Office for National Statistics

There are difficulties with identifying the residency of a DIP, particularly when DIPs are multinational enterprises (MNEs) who tend to have UK and non-UK subsidiaries. In these cases, it is the location of the DIP itself rather than the ownership of the MNE that determines whether the intermediation fee is considered trade.

Where households supply goods and services via DIPs (such as providing accommodation services on Airbnb), this further complicates the way that trade is measured given it cannot be captured on typical business surveys. Households are unlikely to be able to separately identify the intermediation fee and instead will just know the final price paid (including any intermediation fees).

Where households purchase goods and services via DIPs, they are also unlikely to be able to determine whether they are ordering through a domestic platform or not – some platforms appear to have a domestic presence (that is, have a UK website domain name, show prices in pounds sterling, and so on) but the transactions are processed by non-resident businesses, with the UK domain website being used to advertise the products. Therefore, it is not considered feasible to ask for this information to be provided on existing household surveys.

Despite the conceptual difficulties, we are looking into the feasibility of developing estimates of household imports of digital intermediation fees, starting with the manual identification of the largest foreign-based DIPs used by UK households. Currently we are using information which is publicly available, however, other data sources are being considered.

4 . Future developments

The Office for National Statistics' (ONS)' primary framework for research into digital trade is the [Organisation for Economic Co-operation and Development \(OECD\) Handbook on Measuring Digital Trade \(PDF, 4.41MB\)](#). Following on from our [UK trade development plan: 2020](#) and as part of our strategic plan to develop digital trade statistics, the next steps for this research can be considered as part of a broader programme to test, and where possible populate, the template for reporting digital trade. We are aiming to produce the first experimental digital trade estimates later in 2022.

We would appreciate feedback from users to help inform the priorities for the programme in the future. Please email any feedback to trade@ons.gov.uk.

Additional data on the digital economy

As part of the transformation of our data collection methods in this area, the ONS has redeveloped the E-commerce Survey, rebranding to the [Digital Economy Survey](#). The Digital Economy Survey includes questions to measure several additional dimensions of the digital economy, in particular, questions on digital orders, digitally delivered products and digital intermediary platforms. Data collected from these new questions will feed into future research and could potentially be used to populate much of digital trade at an aggregate level.

Digital economy research

The ONS has developed a methodology to use existing data sources to create estimates of some important components of the digital economy against a set of internationally agreed definitions. Our [UK Digital Economy research: 2019](#) article presents gross value added (GVA) estimates for two different definitions of the digital economy. Many of the next steps for digital economy research can be considered as part of a broader programme to test, and where possible populate, the digital supply and use tables.

Administrative data sources

The ONS is investigating the [feasibility of using administrative data sources for UK digital economy research](#). Prior to progressing with digital trade research using administrative sources, additional work will need to be carried out to understand more about how location data of a transaction are captured. For example, is this based on the business or household address at registration or where the transaction is processed such as via a clearing house. It is essential to understand more about this as a domestic transaction may be classed as a cross-border trade unless measures are taken.

5 . Related links

[Feasibility of using administrative data sources for UK digital economy research: May 2022](#)

Article | Released 5 May 2022

Exploring the use of administrative data sources to help produce value estimates of the digital economy.

[UK Digital Economy Research: 2019](#)

Article | Released 28 January 2022

Research developing a framework for measuring the digital economy, including estimates and future plans.