

Article

Trade in services by modes of supply, UK: 2019

Experimental estimates of UK trade in services by mode of supply, country and service type on a balance of payments basis with additional Mode 3 estimates.

Contact:
Dean Scott
trade@ons.gov.uk
+44 (0)1633 455467

Release date:
27 November 2020

Next release:
To be announced

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1 . Main points

- In addition to the £317.7 billion of UK services exported to the world in 2019 on a balance of payments basis, we estimate that a further £627.6 billion of services were provided via UK-owned foreign affiliates (Mode 3).
- Distribution, and maintenance and repair had the highest estimated proportion of UK services supplied to overseas consumers, via the commercial presence of British-owned affiliates (Mode 3).
- Excluding Mode 3, an estimated 55% of UK's imports of services were supplied remotely.
- Excluding Mode 3, intellectual property had the highest estimated proportion of trade that UK imported remotely, at 95%.

2 . Overview

Following on from our first [UK modes of supply experimental estimates](#) published in 2019, information on Mode 3 exports was of particular interest to users of our statistics. The inclusion of Mode 3 provides a fuller and more detailed picture of how UK services are supplied. To achieve the derivation of Mode 3, we have taken on a hybrid approach that combines the linking of various datasets with the use of [Eurostat's pilot methodology \(PDF, 674KB\)](#).

International trade in services defined by [MSITS 2010 \(PDF, 3.37MB\)](#) covers not only trade in services in the conventional narrative of transactions (exports and imports from a balance of payments perspective), but importantly, it also includes the sales of services delivered through enterprises that are locally established but foreign-controlled.

These transactions are not covered by the balance of payments, but instead covered by foreign affiliate statistics (FATS). The General Agreement of Trade in Services (GATS) previously conceived this as commercial presence, otherwise known as Mode 3.

For the purposes of this article and to maintain clarity, where we have included experimental estimates for Mode 3, we refer to this as "services supplied" (or variations of). Where estimates of Mode 3 are excluded and is therefore on a purely balance of payments perspective, we refer to this as "trade in services".

Given data availability, and making use of the latest datasets where possible, we have used 2019 trade in services data and 2018 outward foreign affiliates statistics (OFATS) data to project experimental estimates for 2019. For imports, data are available on a balance of payments basis only, so will exclude Mode 3.

For descriptions of each mode, please see [Section 6: Glossary](#).

3 . British services supplied by modes of supply

Figure 1 illustrates the latest experimental estimates of the proportion of UK services supplied by mode, combining the most recent data available (2019 balance of payments data with 2018 foreign affiliates data).

Remote trade (Mode 1) constituted the second largest way in which UK services were supplied to overseas consumers, at 22% for all services supplied. Just over a quarter of services were supplied remotely to EU countries and residents, whereas for non-EU countries, remote trade constituted one-fifth of services exported.

Services supplied by the movement of people (Mode 2 plus Mode 4) constituted 12% of all British services sold when taken together. Our analysis found that 15% of British services were sold to the EU by the movement of people. For non-EU, this was slightly lower at 10%. A more detailed breakdown for Modes 2 and 4 is available in the Figure 1 data, and the [accompanying exports dataset](#).

Meanwhile, services supplied by UK foreign affiliates (Mode 3) constituted the predominant way in which services were supplied to overseas customers. We estimate that in addition to the £317.7 billion of UK services exported to the world in 2019 on a balance of payments basis, a further £627.6 billion of services was provided via UK-owned foreign affiliates. Of this £627.6 billion, we also estimate that £174.2 billion was supplied to EU, while £453.3 billion was supplied to non-EU.

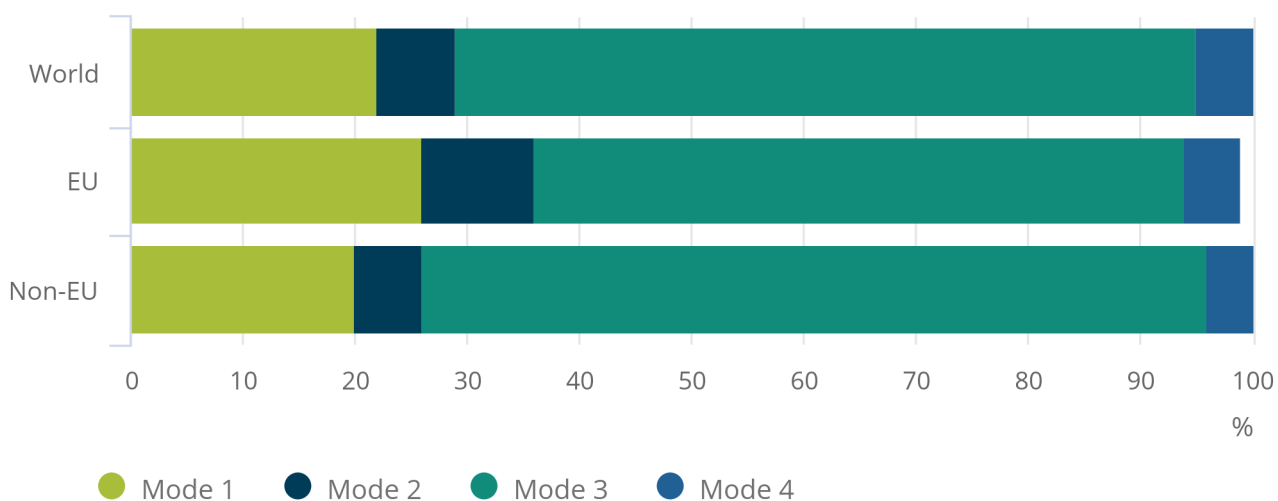
It is worth noting that the supply of services often involves multiple modes, and commercial linkages may exist across all four modes of supply. For instance, a service supplied by movement of the supplier (Mode 4) may be necessary to reinforce remote trade (Mode 1), which in turn may be instrumental for upgrading the capacity of a locally established foreign affiliate (Mode 3) in supplying services.

Figure 1: On top of £317.7 billion trade in services, foreign affiliates supplied an estimated £627.6 billion via Mode 3

Proportion of all British services supplied by mode, 2019

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Proportion of all British services supplied by mode, 2019



Source: Office for National Statistics

Notes:

1. Modes 1, 2 and 4 are derived from a balance of payments basis, whereas Mode 3 is derived using FATS.
2. Figures may not sum because of rounding.

Figure 2 shows the proportions of UK's service types supplied by mode.

Aligning with existing approaches, we allocated 100% of distribution services to Mode 3, resulting in this service acquiring the highest estimated proportion of British services sold to overseas consumers via commercial presence. Maintenance and repair had the second largest estimated proportion of services supplied by Mode 3, at 77%.

Our country-industry-services mapper does not allocate foreign affiliates statistics (FATS)-derived information to government services. In addition, we have excluded allocations to manufacturing services (see [Section 7: Data sources and quality](#) for further detail).

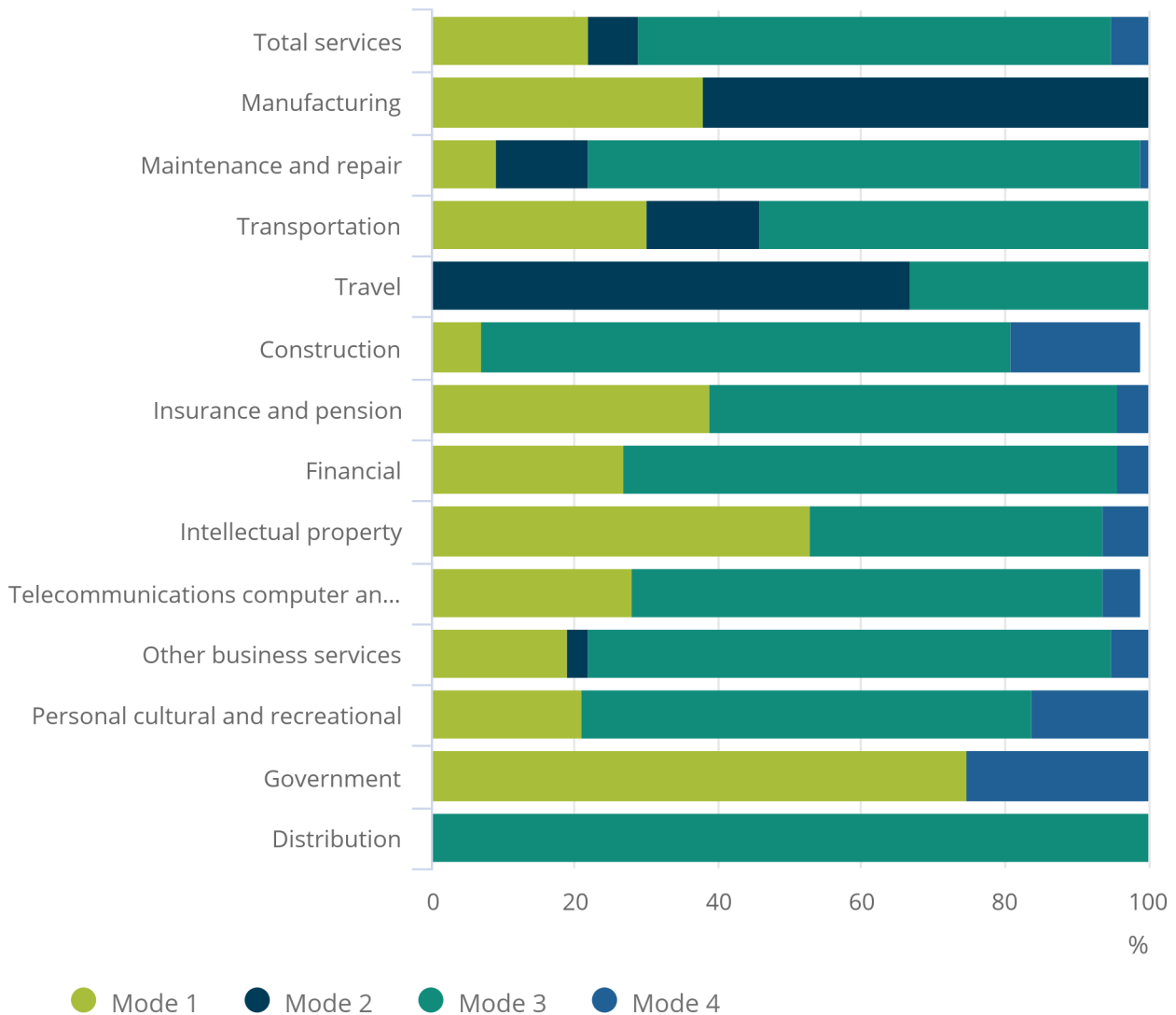
Note that caution should be taken upon comparing certain services by proportion; supply by a particular mode may appear larger relative to other services if the service being compared excludes another mode (for example, Mode 1 supply of government services has no Mode 3 component so will appear relatively large). In such cases, we recommend making use of the data provided containing the values of services supplied where possible.

Figure 2: Distribution, and maintenance and repair had the highest estimated proportion of trade supplied via commercial presence

Proportions (combined trade in services with the additional Mode 3 supply of services) of UK's service types supplied by mode, 2019

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Proportions (combined trade in services with the additional Mode 3 supply of services) of UK's service types supplied by mode, 2019



Source: Office for National Statistics

Notes:

1. Modes 1, 2 and 4 are derived from a balance of payments basis, whereas Mode 3 is derived using FATS.
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4 . Imports by modes of supply

Figure 3 shows that 55% of UK's imports of services was estimated to be supplied remotely, when limited to a balance of payments basis.

Approximately 50% of trade in services was estimated to be imported from the EU by remote means, with the other half being supplied by the movement of people. For non-EU, services imported remotely were estimated to be slightly higher, at 60%, leaving 40% of non-EU imports being supplied by the movement of people.

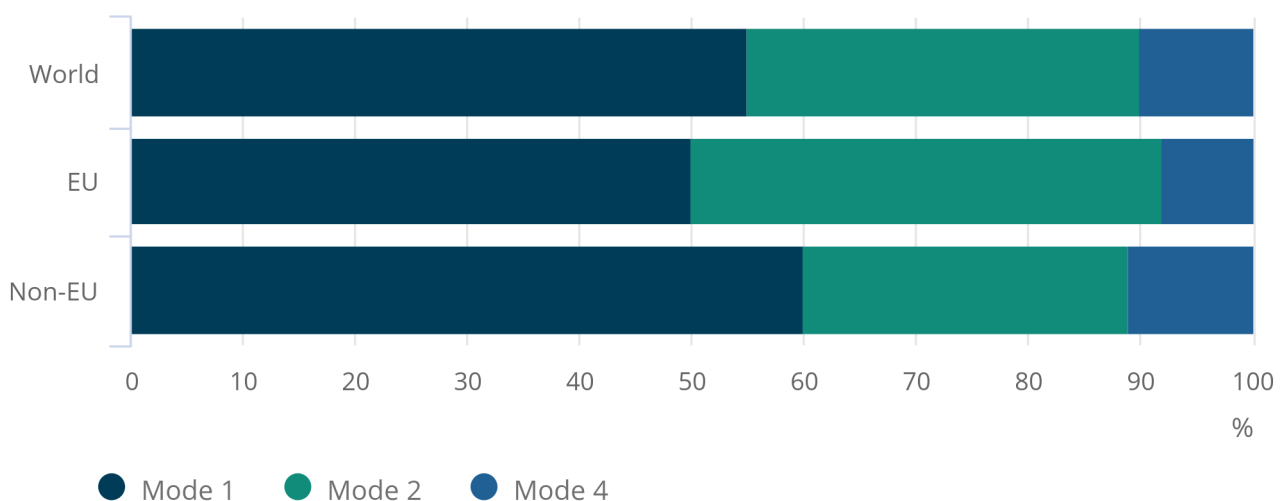
For all three aggregates, Mode 2 predominates over Mode 4; therefore, the tendency for British residents to travel abroad to purchase services was greater than the tendency for foreign suppliers to travel to the UK to sell services.

Figure 3: Excluding Mode 3, an estimated 55% of total imports were supplied to the UK by remote means

Proportion of UK imports by modes of supply from world, EU and non-EU on a balance of payments basis only, 2019

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Proportion of UK imports by modes of supply from world, EU and non-EU on a balance of payments basis only, 2019



Source: Office for National Statistics

Notes:

1. This analysis excludes Mode 3 trade (commercial presence).
2. Figures may not sum because of rounding.

Figure 4 illustrates the estimated proportions of UK's imported service types by modes of supply when limited to a balance of payments basis.

The three services that had the highest proportion of imports supplied remotely were intellectual property (95%), telecommunications (83%), and transportation (80%). The apportioned values of trade in £ millions are available in the [imports dataset](#).

Given that our approach involves allocating 100% of trade to Mode 2 for travel, travel services acquired the highest estimated proportion of Mode 2 imports from a purely balance of payments point of view.

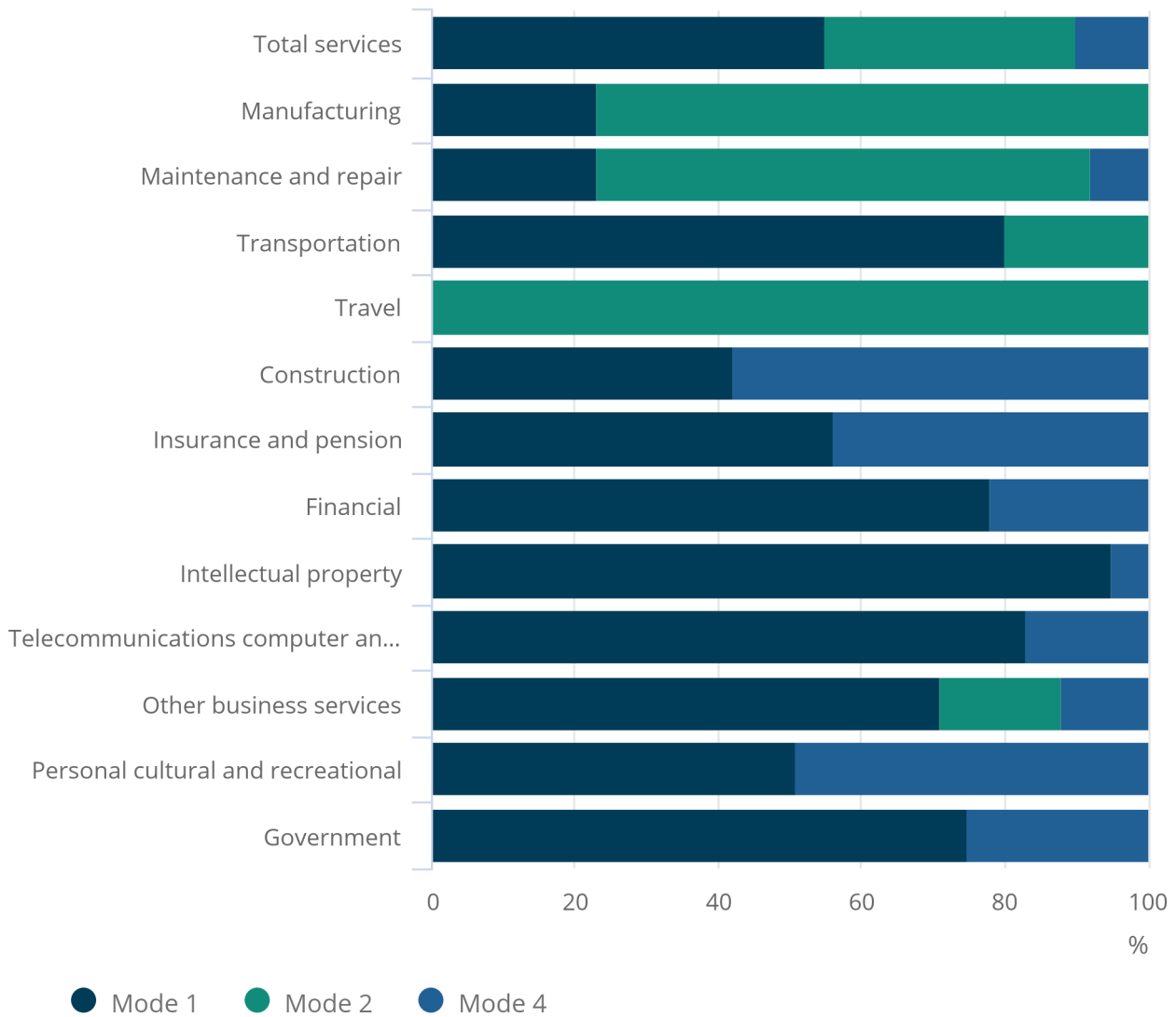
Meanwhile, construction services had the highest proportion of services imported via movement of foreign residents supplying services to the UK (Mode 4).

Figure 4: Not accounting for Mode 3, intellectual property had the highest estimated proportion of trade that UK imported remotely at 95%

Proportion of UK's imported service types by modes of supply on a balance of payments basis only, 2019

Figure 4: Not accounting for Mode 3, intellectual property had the highest estimated proportion of trade that UK imported remotely at 95%

Proportion of UK's imported service types by modes of supply on a balance of payments basis only, 2019



Source: Office for National Statistics

Notes:

1. This analysis excludes Mode 3 trade (commercial presence).
2. Figures may not sum because of rounding.

5 . Modes of supply data

[Exports of services by country, by modes of supply](#)

Dataset | Released 27 November 2020

Country breakdown of trade in services values by mode of supply (exports). Including additional Mode 3 estimates derived from outward foreign affiliates statistics (OFATS) data.

[Imports of services by country, by modes of supply](#)

Dataset | Released 27 November 2020

Country breakdown of trade in services values by mode of supply (imports). Countries include only total services data, while regions include top-level Extended Balance of Payments Services (EBOPS) breakdown.

6 . Glossary

Mode 1

Where a supplier in one country sells a service to a customer in another, but without the movement of people.

An example is UK legal or financial advice services being supplied by a UK business to overseas customers remotely by email or an online platform.

Mode 2

Where a consumer travels to another country and buys a service.

For example, a tourist from another country travels to the UK and pays for a London landmark tour.

Mode 3

Where a foreign company sets up a subsidiary abroad to supply services to foreign customers directly in that country.

For example, a UK telecoms company may establish an affiliate or subsidiary in a foreign country to provide mobile phone services overseas.

Mode 4

Where personnel travel abroad to provide a service.

For example, a UK consultancy firm sends a business analyst to an overseas customer's office to give expertise or to oversee a project.

Annual Survey of Goods and Services (ASGS)

The [Annual Survey of Goods and Services](#) (ASGS) is used to measure turnover generated by UK businesses. In particular, it measures the turnover broken down into the different goods and services from which it is generated, both inside the UK and outside the UK. Data from this survey are used within the Services Producer Price Index (SPPI) and national accounts in their calculation of gross domestic product (GDP), which are both important economic indicators.

Foreign affiliates statistics (FATS)

Foreign affiliates statistics describe the activities of foreign affiliates. Outward foreign affiliate statistics (OFATS) details the activity of foreign affiliates abroad, which are owned by a parent company resident in the reporting economy. Inward foreign affiliate statistics (IFATS) is the inverse, it describes the activity of foreign-owned affiliates in the reporting economy, owned by a parent resident in a foreign country.

Services supplied

For the purposes of this article and to maintain clarity, where we have included Mode 3 on top of the conventional definition of trade in services (on a balance of payments basis), we refer to this as "services supplied" (or variations of).

Trade in services

For the purposes of this article and to maintain clarity, where Mode 3 is excluded and estimates are therefore on a purely balance of payments perspective, we refer to this as "trade in services".

7 . Data sources and quality

Approach

The data on Modes 1, 2 and 4 were compiled by combining information from the International Trade in Services (ITIS) survey, the International Passenger Survey (IPS) and other non-survey services sources, with the proportion of Mode 1 supply collected on the annual ITIS survey and proportions of Mode 2 and Mode 4 estimated using [Eurostat's proportional allocation](#) of Extended Balance of Payments Services (EBOPS) categories to modes of supply. For both exports and imports, Modes 1, 2 and 4 data are consistent with [UK Balance of Payments, The Pink Book: 2020](#).

Mode 3 was derived by combining data from the latest available foreign affiliate statistics (2018) with a trade in services by country and industry dataset as a country-industry-services correspondence table to link up data.

Modes 1, 2 and 4 methodology

The same methods are used in our previous release published in 2019 (for the reporting period 2018) for Modes 1, 2 and 4, with the addition of imputation enhancements that take on data from previous periods. See [Modes of supply: methods \(2019\)](#) for more information.

ITIS

A portion of the [Annual Survey of International Trade in Services](#) (annual ITIS) contains questions to capture the percentage of services exported and imported remotely for 14 broad service categories. This survey instrument is sent out to around 5,000 businesses and allowed us to produce a proportion of remote trade (Mode 1) for each service type captured by the ITIS survey.

Using Eurostat's proportional allocation of EBOPS categories to modes of supply, we have assigned the remaining data by service type to either consumption abroad (Mode 2) or presence of natural persons (Mode 4).

Please note that no country breakdowns are available from the modes of supply questions, so mode of supply proportions are assumed to be the same for each country.

Non-ITIS

Modes of supply estimates of financial services and insurance and pension services are based on data collected via the ITIS survey for remote trade (Mode 1) proportions, with the remainder allocated to presence of natural persons (Mode 4).

For the remaining non-ITIS data sources – transport, travel and government services – the allocation of modes of supply is based on Eurostat's proportional allocation of EBOPS categories to modes of supply.

Mode 3 methodology

Supply of services data on Mode 3 was derived by combining data from the latest available outward foreign affiliate statistics (2018) with a trade in services by country and industry dataset as a country-industry-services correspondence table to link up data.

OFATS

Outward foreign affiliate statistics (OFATS) provides information on the foreign affiliates of the multinational enterprises (MNEs) that have an ultimate controlling institution (UCI) resident in the UK. The statistics capture the number of enterprises, and the turnover and number of persons employed for each affiliate.

The Inter-Departmental Business Register (IDBR) was used to determine the population size, which is approximately 9,000. Dun and Bradstreet (D&B) provides data annually to the Office for National Statistics (ONS) on UK companies and their foreign subsidiaries, which feeds into the IDBR.

The [Outward Foreign Affiliates Statistics Survey](#) is run annually, with a sample size of 200. This includes all enterprise groups with 100 or more foreign affiliates, who are sampled every year. The remainder of the sample consists of enterprise groups who have 99 or fewer foreign affiliates.

Random sample selection is used for these enterprise groups, while sample rotation is also incorporated, which ensures that the sample includes some enterprise groups which were also sampled in the previous year, and some enterprise groups who were not.

Statistics for the banking sector are based on a survey conducted by the Bank of England (BoE), which surveys the largest UK-owned banks with significant non-resident operations. Returns from other survey forms are used for validation purposes and in some instances published accounts are also used.

Exports only

Because of data availability, this release includes information on Mode 3 for UK exports only. Information on Mode 3 for UK imports (which is derived from IFATS information) is expected to be included in a future update.

Isolating the appropriate component from FATS statistics (ASGS)

Fundamentally, turnover attributed to the sales of goods and sales to third countries should not be included in Mode 3; these components must be removed from FATS when compiling Mode 3 statistics.

As the first exploratory step to refine our Mode 3 estimates, we derive domestic services ratios by industry where possible, using an unsuppressed version of the Annual Survey of Goods and Services (ASGS) dataset. The ratio is calculated by deriving the value of services sold domestically, and then dividing this by the total turnover sold domestically, as a crude proxy for the turnover attributed to the sale of domestic services.

FATS data are then linked on this dataset by industry, and values are applied onto these ratios before being mapped to a country-industry-services correspondence table to allocate values to Mode 3.

Country-industry-services correspondence table (TiS by Industry)

An unsuppressed version of the [trade in services dataset spanning the years 2016 to 2018 broken down by country and by proportion of service types by industry](#) was used, allowing for the linking of FATS-derived values by industry, before applying these values to an averaged percentage of services spanning the three years by industry and by country.

Where the proportions of industry by country were not available, we use services by industry of the entity world to estimate. Data are then aggregated to the top-level service accounts (EBOPS) by country, and then aggregated by country to EU, non-EU and world. For individual entities, we further aggregate all service accounts to total services, but retain the top-level services breakdowns for EU, non-EU and world.

Manufacturing activities

Manufacturing activities are not included in the ASGS dataset, so we are unable to remove the approximate goods components from FATS values.

Therefore, until a more robust method is devised to remove goods attributed to industries within manufacturing activities, we made the decision to not allocate FATS values to manufacturing services at present, an existing practice that harmonises our estimates with those undertaken by other organisations.

Distribution services

To ensure international comparability, we have included the addition of distribution services in our estimates. Currently, this is only available for our estimates of exports because distribution services are estimated in whole from data derived from FATS.

Distribution services is measured by the production value variable for the following industries:

- G45 (wholesale and retail trade and repair of motor vehicles and motorcycle)
- G46 (wholesale trade, except of motor vehicles and motorcycles)
- G47 (retail trade, except of motor vehicles and motorcycles)

While IFATS includes production values, OFATS does not, and only includes the turnover value. Therefore, in line with Eurostat's pilot approach for Mode 3, a turnover ratio is calculated by dividing the production value from the turnover value of IFATS. Then, the OFATS turnover of industries G45, G46, and G47 is applied onto this turnover ratio.

Please note that the available IFATS information is used for calculating these turnover ratios only; the data values themselves are not incorporated into the estimates included in this release.

8 . Future developments

Refinements

- Exploring ways to remove goods from manufacturing activities could allow for the reintroduction of allocations to manufacturing services in our country-industry-service correspondence table.
- Inclusion of Mode 3 imports would provide the most complete overview of UK trade in services by modes of supply.
- Feasibility in increasing sample size is being evaluated to allow for more robust estimates.
- Feasibility of the addition of new questions to the inward and outward foreign direct investment (FDI) surveys directly related to Mode 3 is currently being explored.

9 . Related links

[Modes of supply, UK experimental estimates: 2018](#)

Article | Released 31 July 2019

First exploratory estimates of UK trade in services by mode of supply, country and service type on a balance of payments basis using a new experimental dataset.

[Modes of supply: methods](#)

Article | Released 31 July 2019

Detailing the feasibility, methodology and analysis of results on the experimental work for modes of supply in 2019.

[UK Balance of Payments, The Pink Book: 2020](#)

Bulletin | Released 30 October 2020

Balances between inward and outward transactions, providing a net flow of transactions between UK residents and the rest of the world and reports on how that flow is funded.