

Services trade statistics by modes of supply

Statistics Explained

Data extracted in May 2024
Planned article update: January 2026

EXPERIMENTAL

Highlights

" In 2021, 62 % of the EU services exports to non-member countries were supplied via commercial presence in the territory of the non-member countries."

This article presents estimations of the international supply of services (ISS) broken down by modes of supply (MOS) for the EU and the [EU Member States](#), for reference year 2021. The estimates are based on experts' opinions and the Eurostat-WTO model. The results discussed in this article are not yet official statistics and should be considered as being experimental in nature. Statistics on international supply of services by modes of supply aim to answer the question of 'how' services are exchanged across countries and 'where' services are supplied to foreign customers. Detailed information on international supply of services statistics by services category, mode of supply and partner country help policymakers carry out the ongoing and future trade negotiating agenda with facts and strong, evidence-based arguments. Statistics by MoS show how and where services are supplied internationally and they allow for the impact of services trade agreements to be monitored. Although statistics on services by modes of supply are important for different user groups (policy-makers, trade negotiators, researchers, etc.), there is a scarcity of relevant data, which makes it difficult to properly assess the international supply of services. To produce better-quality and more comparable data, Eurostat continues its works in cooperation with countries and international organisations on further developing and better aligning the Eurostat-WTO model to accord with empirical evidence. The current model and applied methodology are described in detail in the section 'Applied methodology'. Detailed methodological guidelines are provided in the [European business statistics compilers guide for European statistics on international supply of services by mode of supply – 2023 edition](#). In February 2023 Eurostat published some experimental national data on MoS - please consult the Eurostat table (online data code: [ext_ser_mos](#)). By October 2024 countries will transmit to Eurostat official MOS data for the first time.

Trade in services by modes of supply

The [General Agreement on Trade in Services \(GATS\)](#), the first multilateral agreement to cover trade in services, defines trade in services as the supply of a service through any of four modes of supply, outlined in the bullet points below.

- Mode 1 - cross-border supply: from the territory of one country into the territory of another country;
- Mode 2 - consumption abroad: in the territory of one country to the service consumer of another country;
- Mode 3 - commercial presence: by a service supplier of one country, through a commercial presence in the territory of another country. The FATS framework is designed to provide information on the activities of enterprises located in foreign markets;

- Mode 4 - presence of natural persons: by a service supplier of one country, through the presence of natural persons of that country in the territory of any other country.

For example, legal services may be supplied to the client (customer) by four separate modes:

- legal advice is provided to the client abroad through electronic channels (**mode 1**)
- the client from abroad comes to the lawyer's office (**mode 2**)
- the lawyer establishes an affiliate abroad to provide legal services (**mode 3**)
- the lawyer goes abroad to provide the legal service to the client (**mode 4**).

In practice, services can be produced, distributed, marketed, sold and internationally delivered through a combination of modes. For example, computer services can be delivered either by electronic means (mode 1) and/or by natural persons travelling abroad to provide those services (mode 4). For computer services, we have used proportionality assumptions to allocate the services flows. For example, we assumed that 75 % of computer services were traded by mode 1 and 25 % by mode 4. See the section 'Applied methodology' for more details. In further MoS research, general proportional assumptions could be replaced by actual shares resulting from surveys of individual countries.

Information on the international supply of services is provided by two different statistical frameworks.

1. **International trade in services (ITSS)** statistics, sourcing from the Balance of payments (BOP) framework. The BOP records transactions between residents and non-residents based on the centre of economic interest (residence) of an institutional unit. As such, it covers principally GATS modes 1, 2 and 4, via international trade in services statistics (ITSS).
2. **Foreign affiliates statistics (FATS)** cover a number of indicators on the activity of controlled foreign affiliates, and thus provide information on the supply of services through GATS mode 3. The exports are estimated using OFATS data, while for the imports are used IFATS.

Services and goods exports competitiveness

EU trade competitiveness can be described by comparing the ratio of net trade (exports minus imports) with total trade (exports plus imports). Table 1 presents these results for both goods and services. The EU's trade competitiveness ratio for total supply of services (taking into account all four modes of supply) was 3.1 %, while for goods it was 5.5 %.

In 2021 the EU balance (exports minus imports) of the international supply of services (taking into account all four modes of supply) amounted to a surplus of € 181 billion. The 'ITSS balance' exhibited a surplus of € 144 billion, while the goods balance showed higher values and amounted to a surplus of € 235 billion (Table 1).

EU trade balance with non-member countries, supply of services compared with goods, 2021

(€ billion)

	Exports	Imports	Balance (exp-imp)	Balance / (exp+imp) %
Total international supply of services (Modes 1, 2, 3 and 4) ¹	2 988	2 806	181	3.1
Supply of services without mode 3 (Modes 1, 2 and 4) ¹	1 127	1 073	54	2.4
ITSS (balance of payments) ²	1 062	918	144	7.3
Goods (balance of payments) ²	2 271	2 035	235	5.5

¹) Estimates using the Eurostat-WTO model.

Modes 1, 2 and 4: ITSS data, adjusted by excluding goods and including distribution services from trade in goods statistics.

Mode 3: FATS data.

²) Source: Eurostat (online data code: bop_eu6_q)

Source: Eurostat and WTO

Table 1: EU trade balance with non-member countries, supply of services compared with goods, 2021

Looking at the balances by modes of supply for 2021, the only deficit was recorded for mode 2 (-€ 1 billion), with a proportion to total trade [(exports - imports)/(exports + imports)] of -0.5 % (Table 2). For mode 1, the surplus was € 17 billion, with a proportion to total trade of 1.0 %. Mode 3 registered the largest surplus with € 128 billion while mode 4 registered a surplus of € 39 billion (Table 2).

EU services trade with non-member countries broken down by mode of supply, 2021

(€ billion)

	Exports	Imports	Balance (exp-imp)	Balance / (exp+imp), %
Mode 1 (cross-border supply)	872	856	17	1.0
Mode 2 (consumption by non-residents in the EU)	133	134	-1	-0.5
Mode 3 (commercial presence)	1 861	1 733	128	3.5
Mode 4 (suppliers temporarily relocating abroad)	122	83	39	18.8
TOTAL (all modes)	2 988	2 806	181	3.1

Note: Estimates using the Eurostat-WTO model.

Modes 1, 2 and 4: ITSS data, adjusted by excluding goods and including distribution services from trade in goods statistics.

Mode 3: FATS data.

Source: Eurostat and WTO

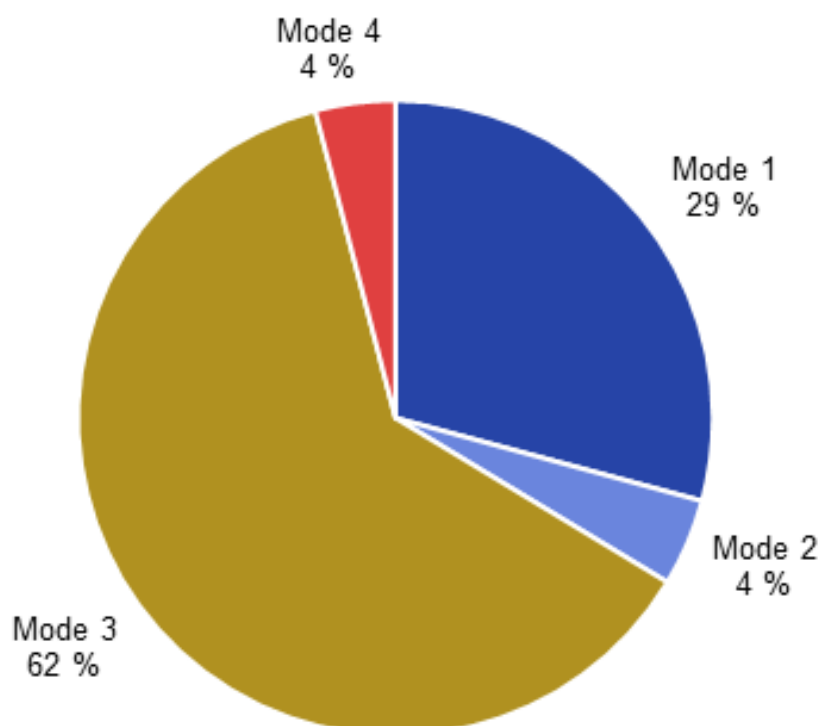
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Table 2: EU services trade with non-member countries broken down by mode of supply, 2021

EU exports and imports of services in 2021 broken down by modes of supply

Figure 1 presents the EU exports of services to countries outside the EU (partner non-EU countries), broken down by the four modes of supply in 2021. When comparing the EU's total exports of services (all four modes) with the exports performed through modes 1, 2 and 4 (computed from the ITSS), the amount increases from € 1 127 billion (sum of modes 1, 2 and 4) to € 2 988 billion (also including mode 3, exports via foreign affiliates). In other words, 62 % (or € 1 861 billion) of the EU's exports of services are supplied via mode 3.

EU exports of services to non-member countries, 2021 (%)



Note: Estimates using Eurostat-WTO model.

Modes 1, 2 and 4: ITSS exports, adjusted by excluding goods and including distribution services from trade in goods statistics.

Mode 3: outward FATS data.

Source: Eurostat and WTO

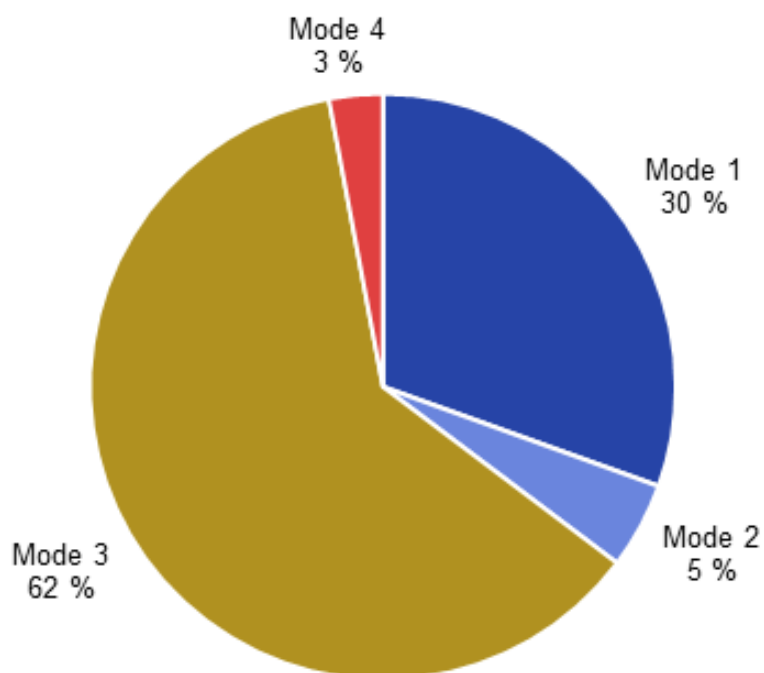
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Figure 1: EU exports of services to non-member countries, 2021

Figure 2 presents EU imports from countries outside the EU, broken down by the four modes of supply. When including the 'imports' through foreign affiliates (mode 3), the imported services from countries outside the EU increase from about € 1 073 billion (sum of modes 1, 2 and 4) to € 2 806 billion respectively. Hence, mode 3 comprised 62 % of the imported supply of services to the EU.

The relative share of mode 2 is just 4 % for exports and 5 % for imports. This relatively low share of mode 2 is due to a significant decrease in Travel services in year 2021 (compared with amounts reported before 2020), as a result of the covid-19 pandemic and associated measures. Travel services is the major contributor to mode 2.

EU imports of services from non-member countries, 2021 (%)



Note: Estimates using Eurostat-WTO model.

Modes 1, 2 and 4: ITSS exports, adjusted by excluding goods and including distribution services from trade in goods statistics.

Mode 3: outward FATS data.

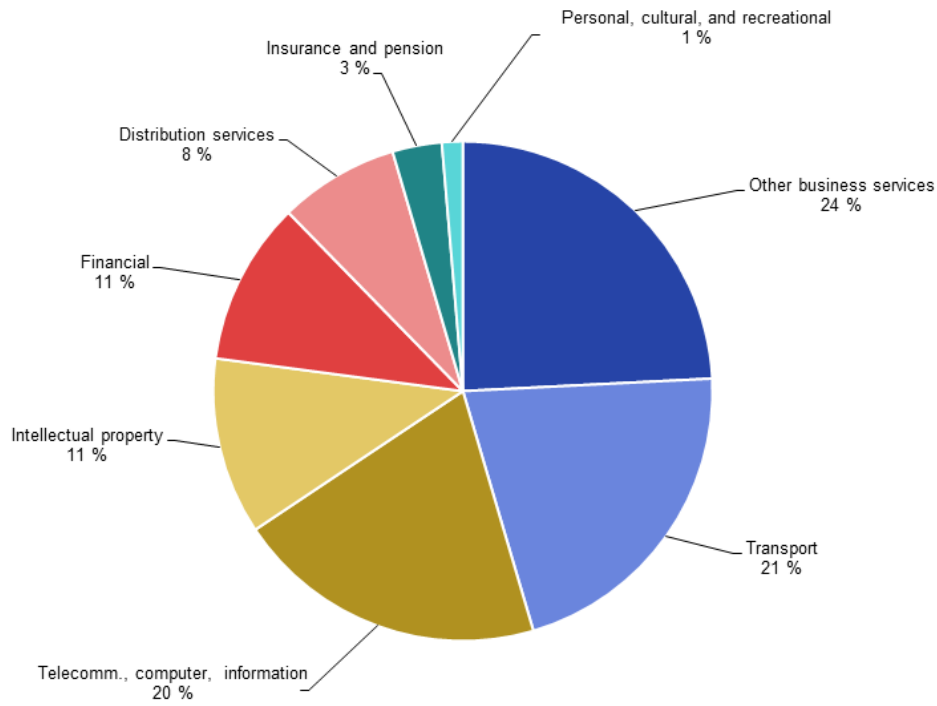
Source: Eurostat and WTO

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Figure 2: EU imports of services from non-member countries, 2021

Mode 1 plays an important role in the supply of services due to the increasing role and development of new technologies. Figure 3 shows the exports of the EU supply of services channeled through mode 1 broken down by type of service. The largest contributors are: 'other business services' accounting for 24 %, 'transport services' accounting for 21 %, 'telecommunication, computer and information services' accounting for 20 %, 'intellectual property' accounting for 11 % and 'financial services' accounting for 11 %.

EU exports of services channelled by mode 1 (cross-border supply) to non-member countries, 2021
(%)



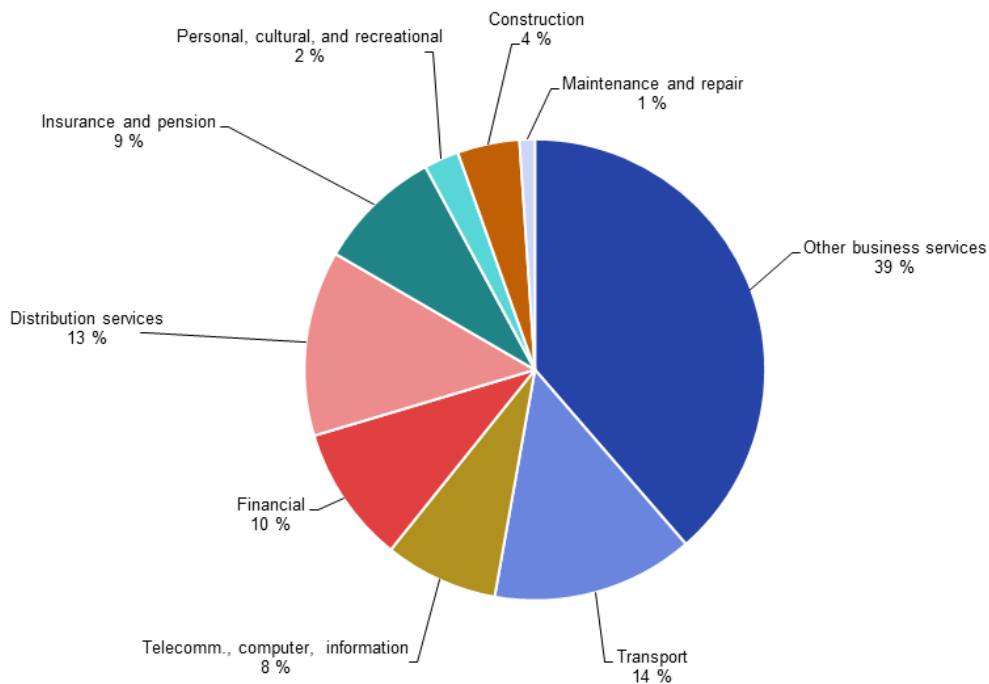
Note: Estimates using Eurostat-WTO model.
ITSS exports, adjusted by excluding goods and including distribution services from trade in goods statistics.
Source: Eurostat and WTO



Figure 3: EU exports of services channelled by mode 1 (cross-border supply) to non-member countries, 2021

As already mentioned, trade in services should not be considered only in terms of cross-border trade; affiliates established abroad should also be taken into consideration. In 2021, the following types of services made the largest contributions for services supplied through mode 3 (commercial presence): 'other business services' (including R&D, accounting, legal and engineering services) accounted for 39 %, 'transport services' for 14 %, 'distribution services' for 13 %, while 'financial services' accounted for 10 % (Figure 4).

EU exports of services channelled by mode 3 (commercial presence) to non-member countries, 2021
(%)



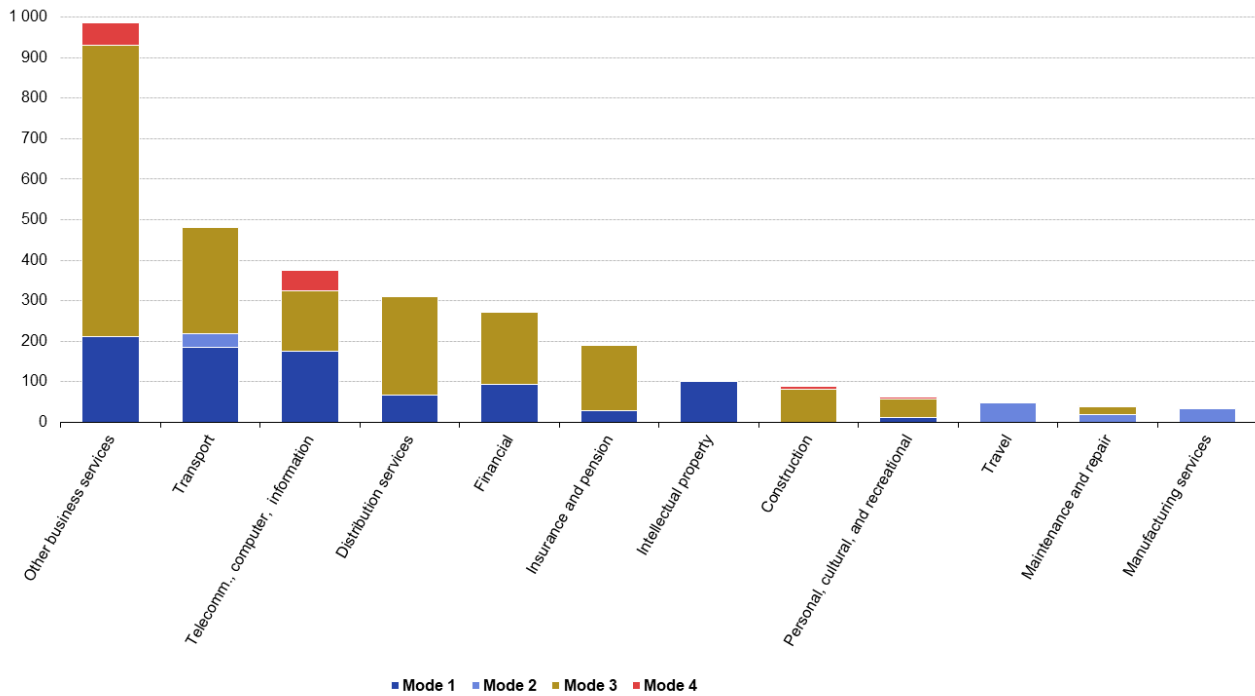
Note: Estimates using Eurostat-WTO model.
 Modes 1, 2 and 4: ITSS exports, adjusted by excluding goods and including distribution services from trade in goods statistics.
 Mode 3: outward FATS data.
 Source: Eurostat and WTO



Figure 4: EU exports of services channelled by mode 3 (commercial presence) to non-member countries, 2021

Figure 5 presents the EU exports of the supply of services broken down by mode and type of service. This shows that 'other business services' (including R&D, accounting, and legal services) have the top ranking, with nearly € 987 billion exported to countries outside the EU. About 73 % (€ 718 billion) of the EU exports of 'other business services' was supplied via mode 3. The second largest category is 'transport services' with € 481 billion, 55 % of which was supplied via mode 3. This was followed by 'telecommunication, computer and information services' (€ 374 billion, 39 % supplied via mode 3) and 'distribution services' (€ 309 billion, 78 % via mode 3). By contrast, export volumes of 'manufacturing services' and 'maintenance and repair services' are marginal.

EU exports of services to non-member countries, by mode of supply and service item, 2021
(€ billion)



Note: Estimates using Eurostat-WTO model.
 Modes 1, 2 and 4: ITSS exports, adjusted by excluding goods and including distribution services from trade in goods statistics.
 Mode 3: outward FATS data.
 Source: Eurostat and WTO



Figure 5: EU exports of services to non-member countries, by mode of supply and service item, € billion, 2021

For services imports (Figure 6), 'other business services' again took the highest ranking, with € 767 billion, with about 59 % supplied via mode 3. They were followed by 'distribution services' (€ 558 billion, 76 % supplied via mode 3) and 'telecommunication, computer and information services' (€ 543 billion, 84 % via mode 3).

EU imports of services from non-member countries, by mode of supply and service item, 2021

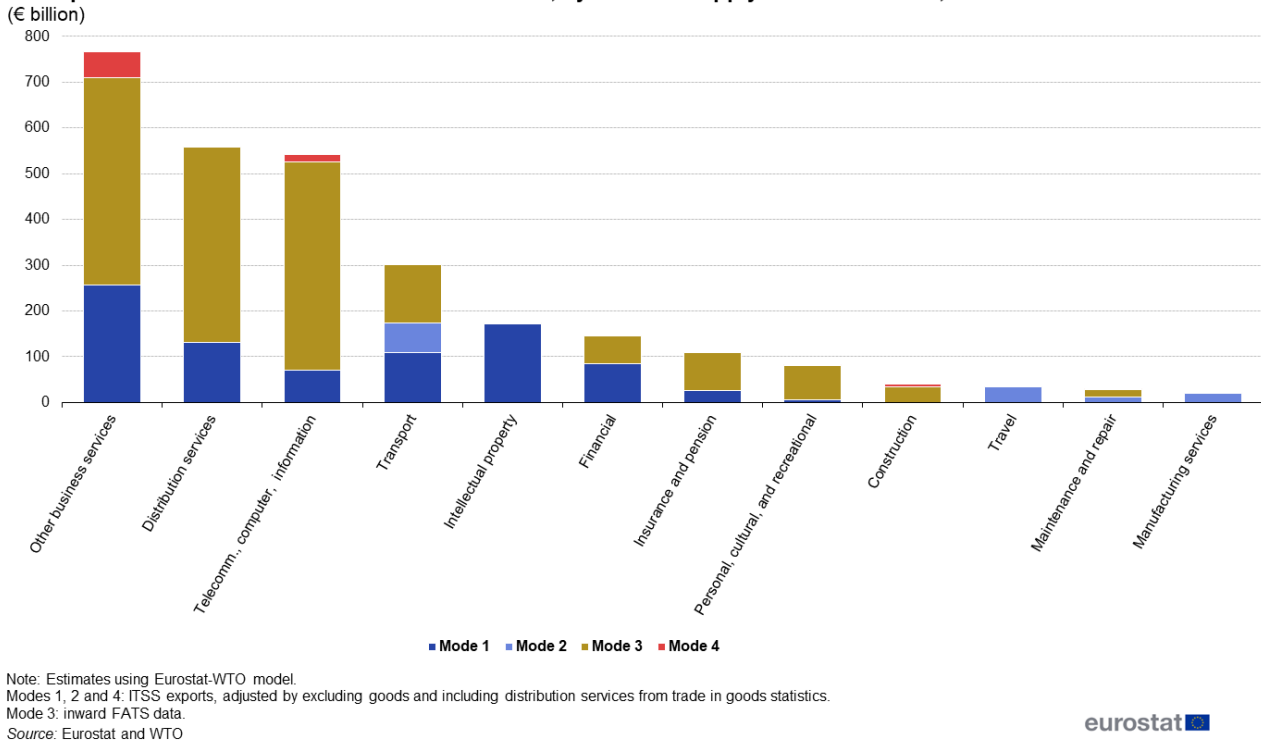
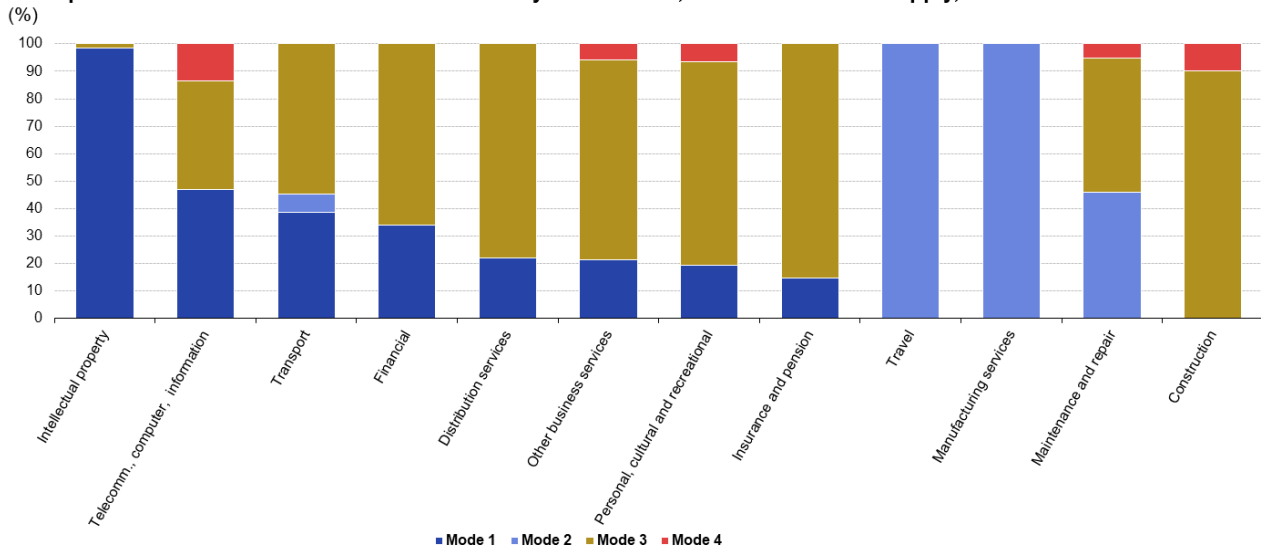


Figure 6: EU imports of services from non-member countries, by mode of supply and service item, € billion, 2021

For the share of each mode per type of service, there is a lot of variation across service types depending on the specificities of the service (Figures 7 and 8). In exports, mode 3 dominated for 'construction' (90 %), 'insurance and pension services' (85 %), 'distribution services' (78 %), 'personal, cultural, and recreational services' (74 %) and 'other business services' (73 %).

This may be due to the need to establish a commercial presence by creating an affiliate to facilitate supply of these specific services. Mode 1 is the dominant mode for 'intellectual property services', accounting for 98 % of exports in this item. Mode 2 is dominant for 'travel' and 'manufacturing services' (100 %), while mode 4 accounts for 13 % of the 'telecommunication, computer and information services'.

EU exports of services to non-member countries by service item, share of modes of supply, 2021

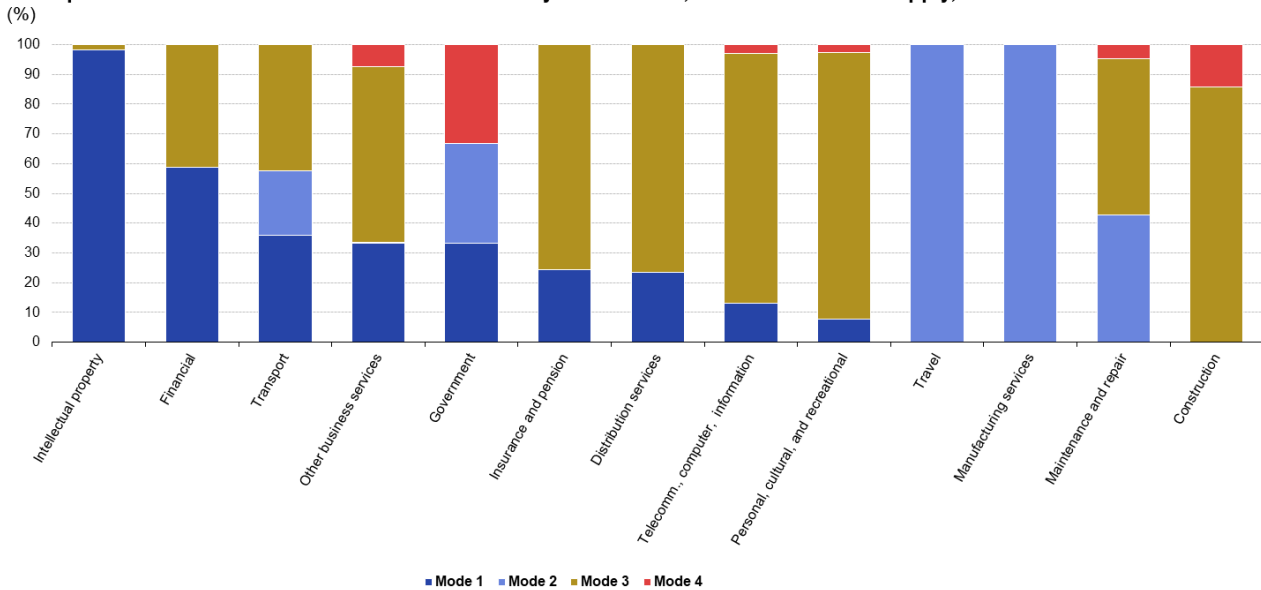


Note: Estimates using Eurostat-WTO model.
 Modes 1, 2 and 4: ITSS exports, adjusted by excluding goods and including distribution services from trade in goods statistics.
 Mode 3: outward FATS data.
 Source: Eurostat and WTO



Figure 7: EU exports of services to non-member countries by service item, share of modes of supply, 2021

EU imports of services from non-member countries by service item, share of modes of supply, 2021



Note: Estimates using Eurostat-WTO model.
 Modes 1, 2 and 4: ITSS exports, adjusted by excluding goods and including distribution services from trade in goods statistics.
 Mode 3: inward FATS data.
 Source: Eurostat and WTO



Figure 8: EU imports of services from non-member countries by service item, share of modes of supply, 2021

As regards imports (Figure 8), mode 3 is the dominant mode for 'personal, cultural, and recreational services' (90 %), 'construction services' (86 %), 'telecommunication, computer and information services' (84 %), 'distribution services' (76 %) and 'insurance and pension services' (76 %). Again, mode 1 is the dominant mode for 'intellectual property services', accounting for 98 % of the imports in this item.

EU Member States exports and imports of services by modes of supply in 2021

The share of services exported through mode 3 is more significant for Finland, Germany, France, Italy and Sweden; services imported through mode 3 are more significant for Czechia, Bulgaria, Poland, Slovakia and Spain.

For each Member State, exports and imports of services by the four modes were calculated using the generic Eurostat-WTO model. Where values were missing, estimates were used instead. Calculations were made for the trade partner 'rest of the world' (world excluding the reporting country). An estimate of the 'distribution services' was included in mode 1. The detailed description of the methodology and sources is presented in the corresponding sections below.

There is considerable variation across Member States in terms of total exports and imports of services by modes of supply. This is mainly due to the differences in traded services across the countries, which is also related to their innovative technologies and expertise in trading in services globally.

For exports to the rest of the world (Figure 9), mode 1 accounts for a considerable share in Luxembourg (82 %), Malta (72 %) and Cyprus (71 %). These results may indicate that those countries are more involved in the innovative technologies used to supply services through electronic channels. Transport services are also considered to be supplied via mode 1. One of the contributors for having predominant mode 1 in Luxembourg are the 'financial services' contributing for about half of the total services export in 2021.

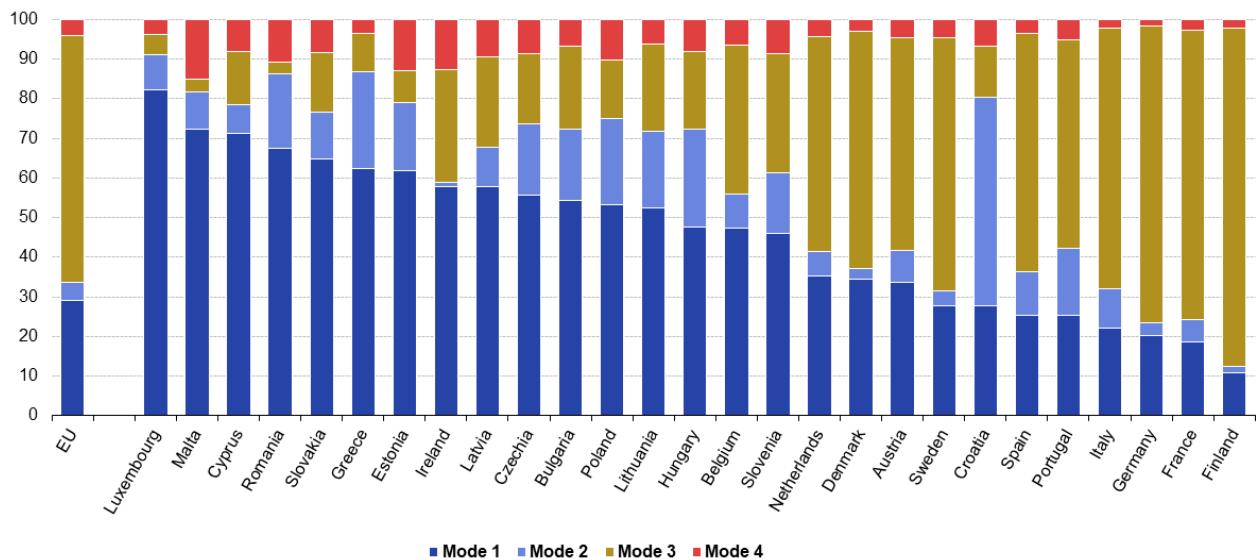
Mode 2 is more significant in Croatia (52 %), Hungary (25 %) and Greece (24 %). Croatia has predominant 'travel services' (about 64 % of the total exports), which is mostly tourism sector and tourists visiting the country which increase the relative significance of mode 2 in the total exports. Also for Greece the greatest contributor to mode 2 services is travel services. As regards Hungary, the greatest contributors to mode 2 are 'manufacturing services', some parts of 'transport services' and travel.

Mode 3 was predominant among some of the larger EU Member States, accounting for 86 % of exports for Finland, 75 % for Germany, 73 % for France, 66 % for Italy and 64 % for Sweden. The results indicate that these countries are more active in capital movement, establishing affiliates abroad to provide services through mode 3.

Mode 4 usually has the smallest proportion in comparison with the other modes in percentage terms. It is somewhat more significant in Malta (where it accounts for 15 % of exports), and in Estonia and Ireland (where it accounts for 13 % of exports for each of these countries).

Share of modes in services exports to the rest of the world, by country, 2021

(%)



Note: Estimates using Eurostat-WTO model.

Modes 1, 2 and 4: ITSS exports, adjusted by excluding goods and including distribution services from trade in goods statistics.

Mode 3: outward FATS data.

Missing data were estimated.

Source: Eurostat and WTO

eurostat

Figure 9: Share of modes in services exports to the rest of the world, by country, 2021 - See Country codes

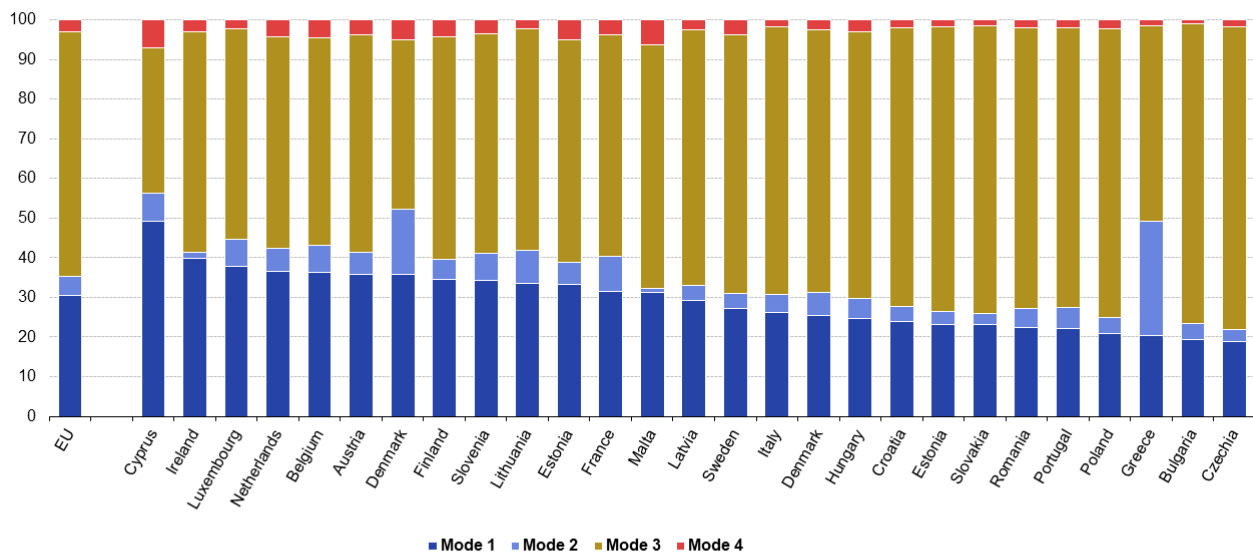
As regards imports from the rest of the world (Figure 10), mode 1 is dominant in Cyprus (49 % of imports), Ireland (40 %) and Luxembourg (38 %).

Mode 2 is significant in Greece (where it accounts for 29 % of imports), Denmark (17 % of imports) and France (9 % of imports). For the rest of the countries it accounts for 8 % or less of the total imports.

Mode 3 accounted for 76 % of imports in Czechia and Bulgaria, 73 % of imports in Poland and Slovakia and 72 % of the imports in Spain, indicating that these countries are attractive destinations for the establishment of foreign affiliates in the services sector.

Mode 4 imports are somewhat more significant in Cyprus and Malta (where mode 4 accounts for 7 % and 6 % of imports respectively). For all other countries it accounts for 5 % or less of their imports.

Share of modes in services imports from the rest of the world, by country, 2021 (%)



Note: Estimates using Eurostat-WTO model.
 Modes 1, 2 and 4: ITSS exports, adjusted by excluding goods and including distribution services from trade in goods statistics.
 Mode 3: inward FATS data.
 Missing data were estimated.
 Source: Eurostat and WTO

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Figure 10: Share of modes in services imports from the rest of the world, by country, 2021

Applied methodology

The Eurostat-WTO model is an operational version of the MSITS 2010 simplified approach; it can be used to produce first estimates on the international supply of services based on existing statistics. The second edition of the MOS compilers guide was published by Eurostat in December 2023: [European business statistics compilers guide for European statistics on international supply of services by mode of supply – 2023 edition](#). The compilers guide presents the Eurostat-WTO model in detail.

The consolidated Eurostat-WTO model stems from the efforts of the two organisations, in cooperation with several countries. It builds upon and combines the experience acquired through two complementary exercises:

- The Eurostat simplified approach was developed by Eurostat in cooperation with WTO and several countries. It builds upon the MSITS 2010. Eurostat has also developed a mapping table to allocate FATS turnover (mode 3) by NACE to EBOPS items.
- The WTO Trade in Services by Mode of Supply (TiSMoS) project is an experimental dataset produced by the WTO and funded by the European Commission's Directorate-General for Trade. TiSMoS covers 200 individual economies for the period 2005-2017. The European Union aggregate is available from 2010 to 2017. The information is broken down by service sector and refers to the economies' trade with the rest of the world.

The starting point for this approach is the MSITS 2010 guidelines. The model uses data from ITSS (based on the EBOPS services classification) and FATS (based on the activities of the affiliates, reported according to the NACE classification). The estimations are complemented with other data sources (such as tourism statistics, trade by enterprise characteristics (TEC), services trade by enterprise characteristics (STEC) and structural business statistics (SBS)). The model allocates each EBOPS item in one or more modes. As a first step, several adjustments are needed for certain items: (e.g. travel and construction items are adjusted by removing the value of goods, and distribution services traded through mode 1 are estimated from goods). Each EBOPS item is then assigned to one or more modes based on the MSITS 2010 suggestions and an expert assessment of how specific service items are most likely to be supplied to consumers. These assumptions were based on: (i) evidence and data from some EU countries; and (ii) expert opinion. The distributions provided are used for both trade flows and for all years. Generally (and in the absence of other evidence), the recommendation is to use the same allocation for all partner countries (a different allocation is suggested only for intra-EU construction trade).

Table 3 presents the allocation shares suggested by the Eurostat-WTO model that were used to produce the estimation of this article. For the purposes of this article the goods value present in the travel item was estimated at 25 % of the total travel item; therefore only 75 % of the travel exports/imports entered the calculations.

Recommended default allocation of EBOPS items to modes of supply according to the Eurostat-WTO model

Item	EBOPS 2010 Description	Mode type (%)			
		M1	M2	M3	M4
SA	Manufacturing services on physical inputs owned by others		100		
SB	Maintenance and repair services n.i.e.		90		10
SC	Transport	90	10		
SC1	Sea transport	100			
SC11	Passenger (Sea)	100			
SC12	Freight (Sea)	100			
SC13	Other (Sea)		100		
SC2	Air transport	100			
SC21	Passenger (Air)	100			
SC22	Freight (Air)	100			
SC23	Other (Air)		100		
SC3	Other modes of transport	100			
SC31	Passenger (Other)	100			
SC32	Freight (Other)	100			
SC33	Other (Other)		100		
SC4	Postal and courier services	100			
SD	Travel (services only)		100		
SE	Construction			10	90
SF	Insurance and pension services	100			
SG	Financial services	100			
SH	Charges for the use of intellectual property n.i.e.	100			
SI	Telecommunications, computer, and information services	80			20
SI1	Telecommunications services	100			
SI2	Computer services	75			25
SI3	Information services	100			
SJ	Other business services	80			20
SJ1	Research and development services	90			10
SJ2	Professional and management consulting services	75			25
SJ3	Technical, trade-related and other business services	80			20
SJ31	Architectural, engineering, scientific, and other technical services	75			25
SJ311	Architectural services	75			25
SJ312	Engineering services	75			25
SJ313	Scientific and other technical services	75			25
SJ32	Waste treatment and de-pollution, agricultural and mining services		10		90
SJ321	Waste treatment and de-pollution		75		25
SJ322	Services incidental to agriculture, forestry and fishing				100
SJ323	Services incidental to mining, and oil and gas extraction				100
SJ33	Operating leasing services	100			
SJ34	Trade-related services	100			
SJ35	Other business services n.i.e.	75			25
SK	Personal, cultural, and recreational services	75			25
SL*	Government goods and services n.i.e. debits (commercial services only)	10	10		10

*Only imports on a commercial basis are covered in terms of Mode of Supply. Non-commercial services are assumed to be 70 % of government goods and services n.i.e. debits.

Note: shares for main EBOPS items are in bold.

Source: Eurostat and WTO

Table 3: Modes of supply default allocation (Eurostat-WTO model)

For the estimation of mode 3, FATS economic variables should be adjusted to cover only output sold locally. For the purposes of this article, since the partner area used is 'rest of the world' or 'non-EU countries', we did not adjust the FATS data.

The complete methodology is presented in the [Eurostat modes of supply compilers guide](#) .

Feedback

To help Eurostat improve these experimental statistics, users and researchers are kindly invited to give us their [feedback by email](#)

Source data for tables and graphs

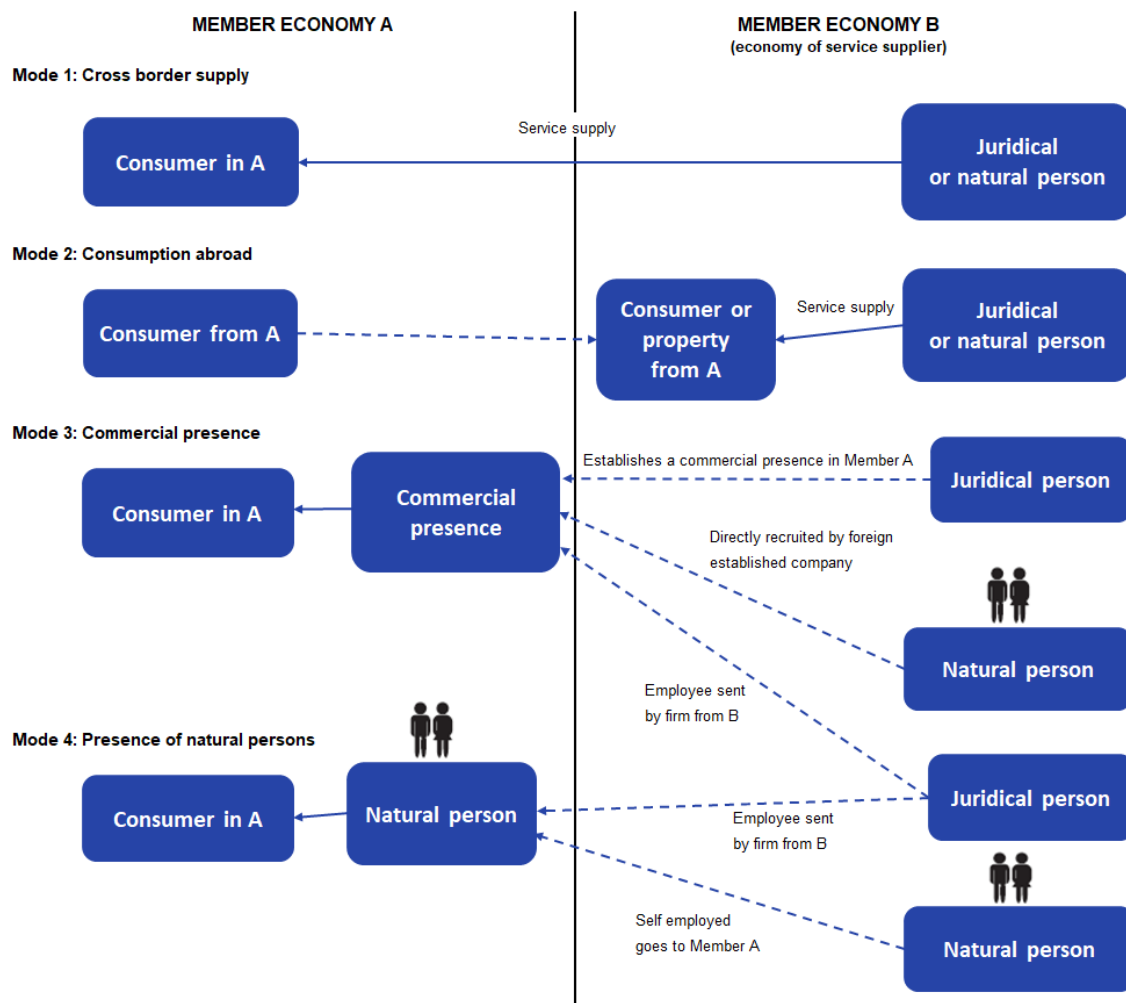
[Download Excel file](#) Modes of supply 2021 data

Context

The [WTO General Agreement on Trade in Services \(GATS\)](#), in force since 1995, was the first trade agreement to cover services on a multilateral basis. In the GATS, the supply of services is defined based on the location of the supplier and consumer at the time when the transaction takes place. The GATS defines trade in services as 'the supply of a service through four modes of supply'. Services broken down by the mode of supply give an indication of where and in which ways the services are supplied to foreign customers. For example, legal services may be supplied to the customer through email (cross-border supply or 'mode 1') or by the customer travelling to the lawyer's country (consumption abroad or 'mode 2'). However, these services may also be provided to the customer by the lawyer, in person, travelling to the customer's country of residence (presence of natural persons or 'mode 4') or by an established affiliate of the lawyer in the customer's country of residence (commercial presence or 'mode 3'). This extended dimension of international trade in services, also referred to as international supply of services, matters greatly from a trade policy perspective, as market access conditions vary among the four ways of supplying services internationally. Since GATS, most other regional (bilateral or plurilateral) trade agreements follow similar principles in setting out their commitments according to the four modes of supply. Consequently, trade policy makers need statistics to support them in negotiating commitments in their services markets and to monitor the results of their negotiations. These negotiations can take place at global, plurilateral or bilateral level, for individual service sectors and according to how the respective services are supplied internationally, i.e. by mode of supply. For monitoring how these commitments are implemented, politicians, governments and analysts require statistics to assess whether such commitments create trade or divert trade. Statistics on services supplied through all four modes are also used for economic analysis and economic policy, as they provide a more complete picture of how businesses supply and purchase services internationally, by combining services traded across the border (by a non-resident to a resident) with services supplied via foreign affiliates. A sounder understanding of the trade-investment nexus in the services sector would allow for a more accurate assessment of the role of services in the productive structure of an economy and their contribution to its economic and social development, as well as its position in regional and global supply chains.

Current information on international trade in services is structured around the dimensions of 'who' is trading (with whom), 'what' is being traded (the type of service), and 'how much' in terms of monetary value. The [Manual on Statistics of International Trade in Services 2010](#), together with the corresponding [Compiler's Guide](#), provide extensive guidance on how to collect, compile and disseminate trade in services statistics following internationally agreed standards. The information needs described in MSITS 2010 were, in fact, driven by the structure of GATS. Detailed information on international supply of services statistics by services category, mode of supply (MoS) and partner country help policymakers carry out the ongoing and future trade negotiating agenda with facts and strong, evidence-based arguments. Statistics by MoS show how and where services are supplied internationally and they allow for the impact of services trade agreements to be monitored.

A synthetic view of modes of supply



Source: MSITS 2010

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Figure 11: A synthetic view of modes of supply

Explore further

Thematic section

- [International Trade in Services](#)

External links

- [GATS, the Modes of Supply and Statistics on Trade in Services](#)