

The WTO's experience in Measuring Trade in Digitally Delivered Services

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WTO Work Programme on Electronic Commerce definition (1998)

“The production, distribution, marketing, sale or delivery of goods and services by electronic means”

E-commerce

Definition for measurement purposes (OECD, 2009)

“The sale or purchase of a good or service, conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders”

Digital Trade

Handbook on Measuring Digital Trade
IMF, OECD, UNCTAD and WTO, 2023

“All international trade that is digitally ordered and/or digitally delivered”

Domestic e-commerce

“The **domestic** 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 ordered trade = International e-commerce

“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

“All **international** trade transactions that are delivered remotely over computer networks”

International transactions that are both digitally ordered and digitally delivered

Digitally delivered trade

“All international trade transactions that are delivered remotely over computer networks”



Only services!

Digitally delivered trade is a SUBSET of international services transactions between residents and nonresidents in the BOP

The payment for digitally delivered services can be online or offline



Digital delivery via the Internet or private networks (e.g. via an extranet) which can be accessed through:

- laptop
- tablet
- mobile phone
- any communication device

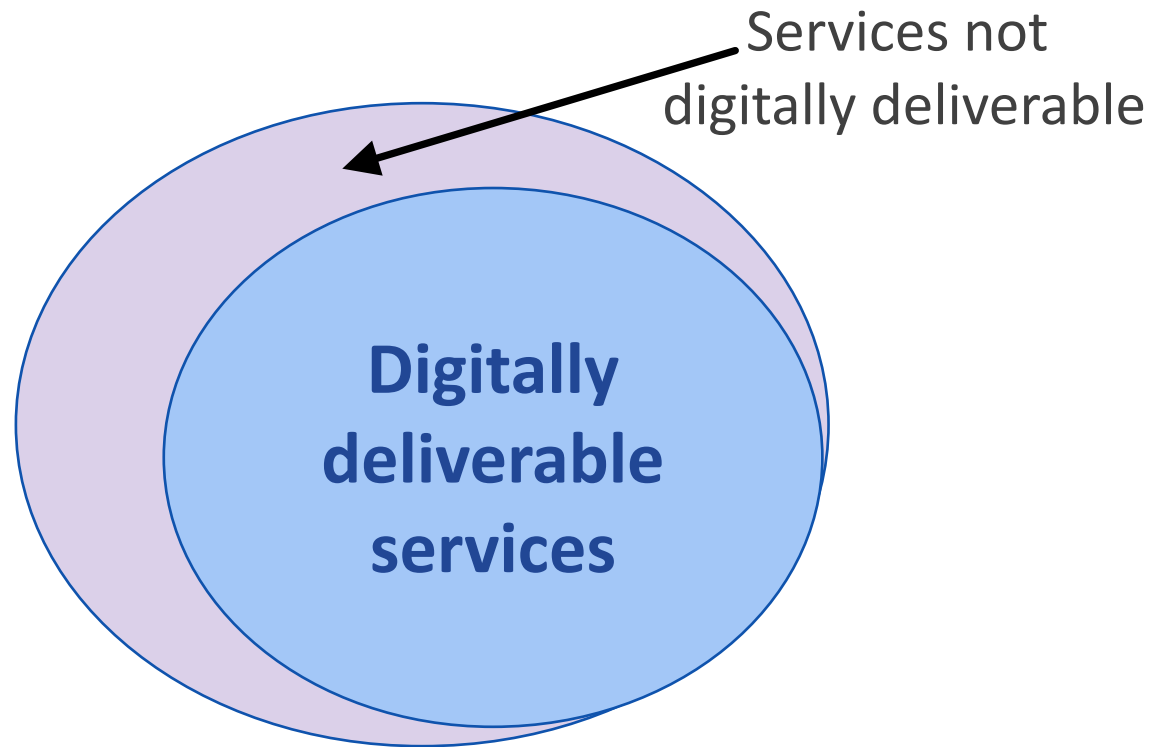
Any form of digital delivery is included

- ✓ manually typed emails
- ✓ telephone calls
- ✓ video calls
- ✓ fax messages
- ✓ cloud networks

- ✓ apps
- ✓ DIPs

Step 1 for measuring digitally delivered trade:
Identify in the Balance of Payments services which can be
delivered digitally: **Digitally deliverable services**

Total services



But **what services** can be
digitally deliverable?

TABLE 4.1: DIGITALLY DELIVERABLE SERVICES IN THE EXTENDED BALANCE OF PAYMENTS SERVICES CLASSIFICATION (EBOPS 2010)		
	SDMX-BOP DSD ⁴ components	EBOPS 2010 components
Digitally deliverable services supplied cross-border (Mode 1)		
Insurance and pension services	SF	6
Financial services	SG	7
Charges for the use of intellectual property n.i.e.	SH	8
Telecommunications, computer and information services	SI	9
Research and development services	SJ1	10.1
Professional and management consulting services	SJ2	10.2
Architectural, engineering, scientific and other technical services	SJ31	10.3.1
Trade-related services	SJ34	10.3.4
Other business services n.i.e.	SJ35	10.3.5
Audio-visual and related services	SK1	11.1
Health services	SK21	11.2.1
Education services	SK22	11.2.2
Heritage and recreational services	SK23	11.2.3
Digitally deliverable services consumed abroad (Mode 2)	<i>Recorded <u>within</u> item SD (Travel)</i>	<i>Recorded <u>within</u> item 4 (Travel)</i>

Digitally Deliverable Services

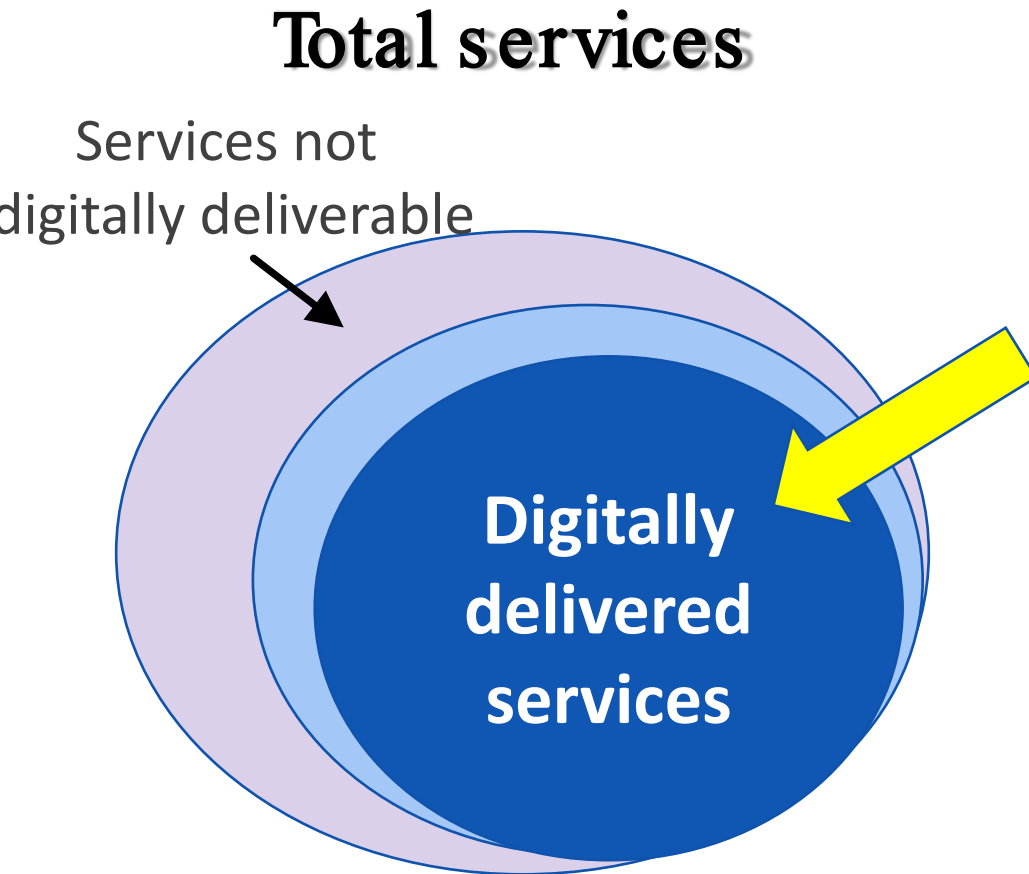
Table 4.1
in the Handbook on
Measuring Digital
Trade

TABLE C.1: EXPANDED TABLE ON DIGITALLY DELIVERABLE SERVICES IN EBOPS 2010

	Statistical Data and Metadata eXchange Balance of Payments Data Structure Definition (SDMX BOP DSD) components	Extended Balance of Payments Services classification (EBOPS 2010) components
Professional and management consulting services	SJ2	10.2
Legal, accounting, management consulting and public relations services	SJ21	10.2.1
Legal services	SJ211	10.2.1.1
Accounting, auditing, bookkeeping and tax consulting services	SJ212	10.2.1.2
Business and management consulting and public relations services	SJ213	10.2.1.3
Advertising, market research and public opinion polling services	SJ22	10.2.2
Of which: Convention, trade fair and exhibition organization services	SJ22z	10.2.2.1
Architectural, engineering, scientific and other technical services	SJ31	10.3.1
Architectural services	SJ311	10.3.1.1
Engineering services	SJ312	10.3.1.2
Scientific and other technical services	SJ313	10.3.1.3
Trade-related services	SJ34	10.3.4
Other business services n.i.e.	SJ35	10.3.5
Of which: Employment services, i.e., search, placement and supply of personnel services	SJ35z	10.3.5.1

Examples of disaggregated digitally deliverable services

Step 2 for measuring digitally delivered trade: Carve out services *actually* digitally delivered

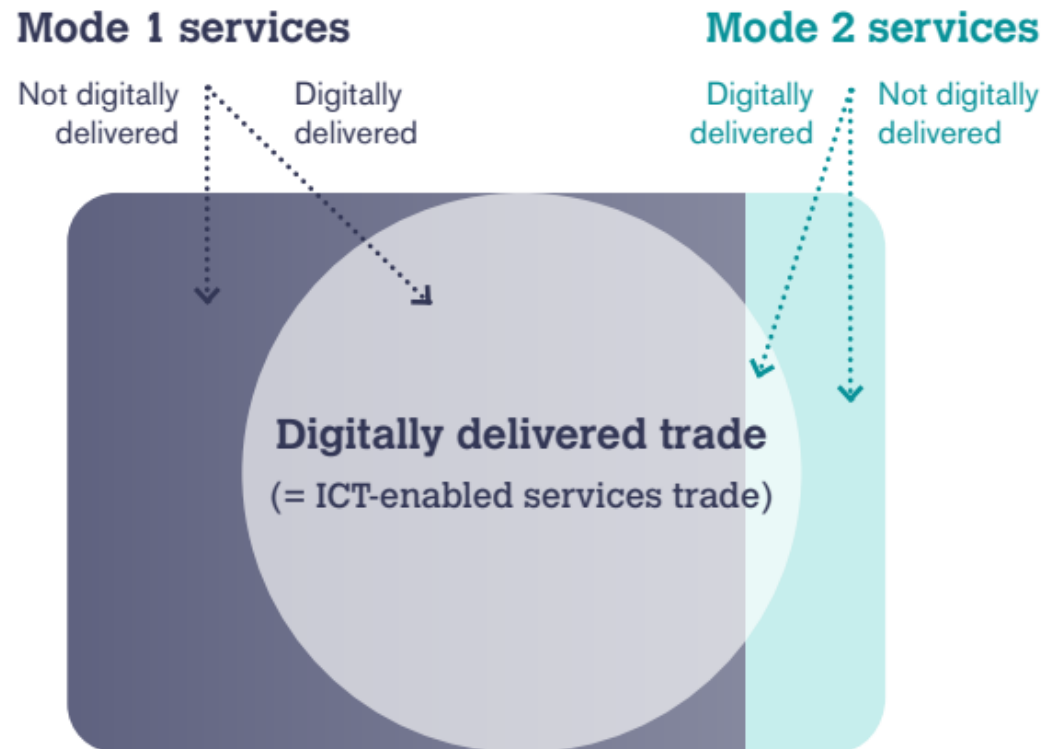


**Digitally deliverable does not imply
always digital delivery when traded**

The share of digitally delivered services trade in total trade depends on its diversification, digital infrastructure, skills and the digital propensity of firms

Digitally delivered trade is equivalent to WTO GATS Mode 1 cross-border supply *for digitally deliverable services*

Figure 2.2: Digitally delivered trade and related statistical concepts



Source: IMF, OECD, UNCTAD and WTO.

Digitally delivered trade through Mode 2: Consumption abroad

Services digitally delivered consumed while travelling abroad

Alternative breakdown by product

Travel
in the BOP



4a.1 Goods

- 4a.2 Local transport services
- 4a.3 Accommodation services
- 4a.4 Food-serving services
- 4a.5 Other services

of which:

4a.5.1 Health services

4a.5.2 Education services

- Online museum guide or city tours
- Medical consultations
- E-sim card
- Online course
- etc. ?

WTO GATS Mode 2: Consumption abroad – takes place when the service is supplied “in the territory of one Member to the service consumer of any other Member”

TABLE D.1: RECOMMENDED DEFAULT ALLOCATION BY MODE OF SUPPLY OF DIGITALLY DELIVERABLE SERVICES IN EBOPS 2010 IN THE EUROSTAT-WTO MODEL

Percentage of total trade in each EBOPS 2010 component

Component	EBOPS 2010 Description	Mode 1	Mode 2	Mode 3	Mode 4
Digitally deliverable services supplied cross-border (Mode 1)					
SF	Insurance and pension services	100			
SF1	Direct insurance	100			
SF11	Life insurance	100			
SF12	Freight insurance	100			
SF13	Other direct insurance	100			
SF2	Reinsurance	100			
SF3	Auxiliary insurance services	100			
SF4	Pension and standardized guarantee services	100			
SF41	Pension services	100			
SF42	Standardized guarantee services	100			
SG	Financial services	100			
SG1	Explicitly charged and other financial services	100			
SG2	Financial intermediation services indirectly measured (FISIM)	100			
SH	Charges for the use of intellectual property n.i.e.	100			
SH1	Franchises and trademarks licensing fees	100			
SH2	Licences for the use of outcomes of research and development	100			
SH3	Licences to reproduce and/or distribute computer software	100			
SH4	Licences to reproduce and/or distribute audio-visual and related products	100			
SH41	Licences to reproduce and/or distribute audio-visual products	100			
SH42	Licences to reproduce and/or distribute other products	100			

**Annex D:
Table of allocation
by mode of supply
of digitally
deliverable services**

TABLE D.1: RECOMMENDED DEFAULT ALLOCATION BY MODE OF SUPPLY OF DIGITALLY DELIVERABLE SERVICES IN EBOPS 2010 IN THE EUROSTAT-WTO MODEL

Percentage of total trade in each EBOPS 2010 component

Component	EBOPS 2010 Description	Mode 1	Mode 2	Mode 3	Mode 4
SI	Telecommunications, computer and information services	80			20
SI1	Telecommunications services	100			
SI2	Computer services	75			25
SI21	Computer software	75			25
SI21z	<i>Of which: Software originals</i>	100			
SI22	Other computer services	75			25
SI3	Information services	100			
SI31	News agency services	100			
SI32	Other information services	100			
SJ	Other business services	80			20
SJ1	Research and development services	90			10
SJ11	Work undertaken on a systematic basis to increase the stock of knowledge	90			10
SJ111	Provision of customized and non-customized research and development services	90			10
SJ112	Sale of proprietary rights arising from research and development	100			
SJ1121	Patents	100			

Component	EBOPS 2010 Description	Mode 1	Mode 2	Mode 3	Mode 4
SJ1122	Copyrights arising from research and development	100			
SJ1123	Industrial processes and designs	100			
SJ1124	Other sales of proprietary rights arising from research and development	100			
SJ12	Other research and development services	90			10
SJ2	Professional and management consulting services	75			25
SJ21	Legal, accounting, management consulting and public relations services	75			25
SJ211	Legal services	75			25
SJ212	Accounting, auditing, bookkeeping, and tax consulting services	75			25
SJ213	Business and management consulting and public relations services	75			25
SJ22	Advertising, market research and public opinion polling services	75			25
SJ22z	<i>Of which: Convention, trade fair and exhibition organization services</i>	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
SJ34	Trade-related services	100			
SJ35	Other business services n.i.e.	75			25
SJ35z	<i>Of which: Employment services, i.e., search, placement and supply services of personnel</i>	75			25
SK	Personal, cultural and recreational services	75			25
SK1	Audio-visual and related services	70	10		20
SK11	Audio-visual services	70	10		20
SK11z	<i>Of which: Audio-visual originals</i>	100			
SK12	Artistic-related services	70	10		20
SK2	Other personal, cultural and recreational services	75			25
SK21	Health services	75			25
SK22	Education services	75			25
SK23	Heritage and recreational services	75			25

The WTO has updated the allocation of shares in the Eurostat-WTO model

Example: Computer services and subsectors of other business services

Years prior to the pandemic

Mode 1: 75% Mode 4: 25%

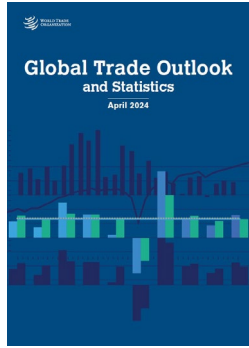
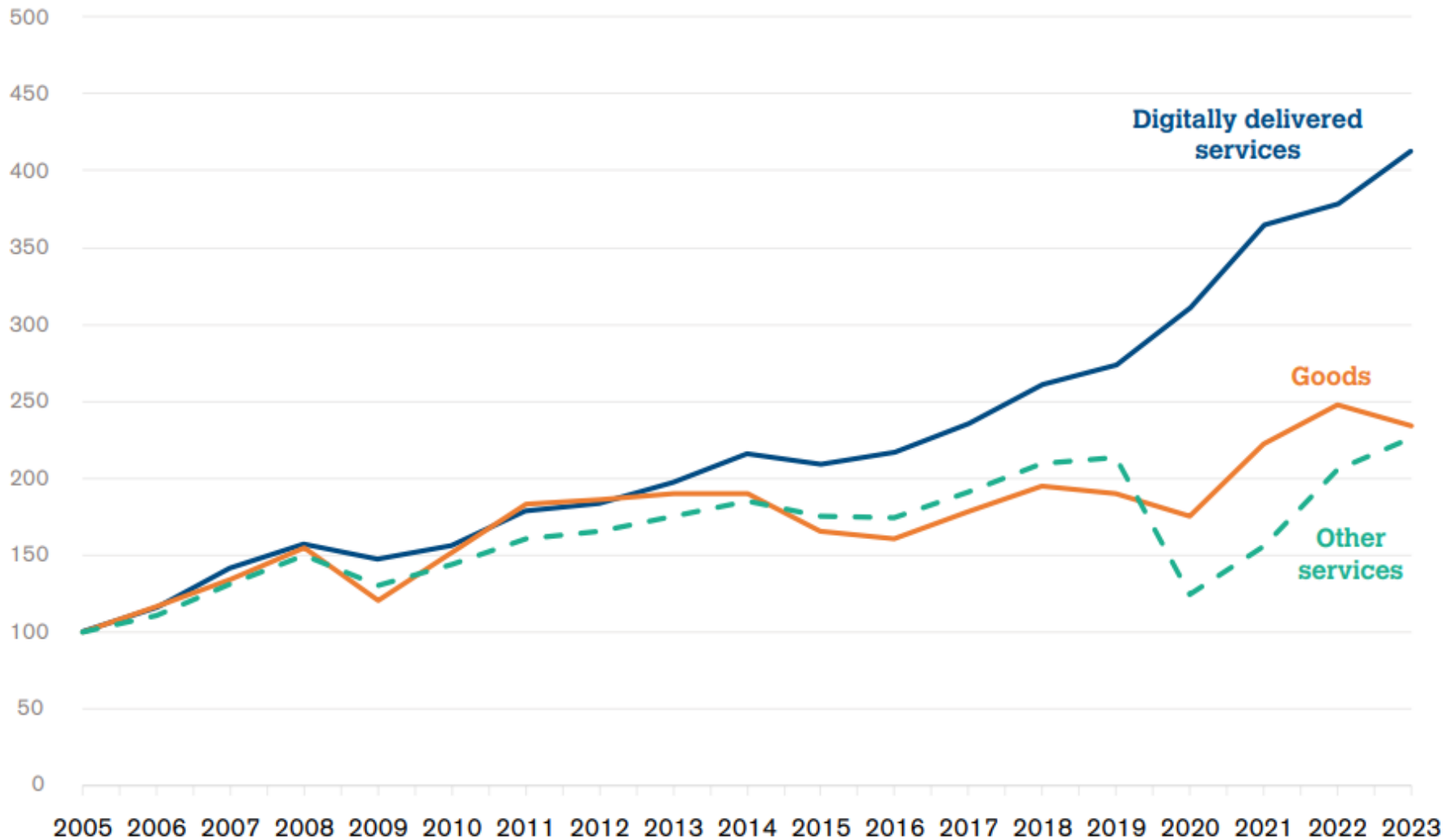
Pandemic and post-pandemic years

Mode 1: 95% Mode 4: 5%

- New surveys
- Border closures and Travel restrictions
- Increased services digitalization
- High transport costs due to inflation
- cost-cutting efforts by firms

Chart 19: Global exports of digitally delivered services, 2005-2023

Index 2005=100

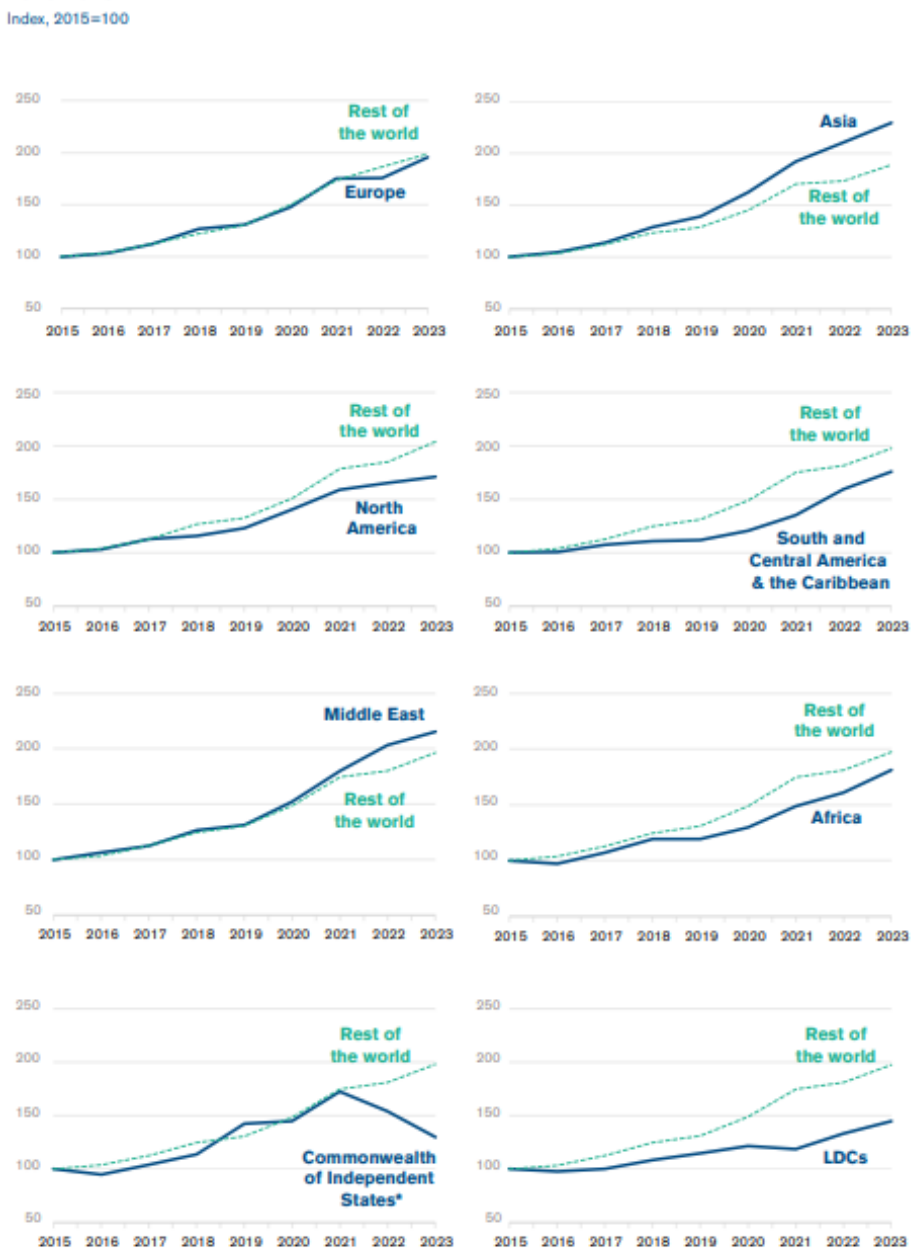


Global exports of digitally delivered services reached US\$ 4.25 trillion in 2023,

- 13.8% of world exports of goods and services
- 54% of services exports.

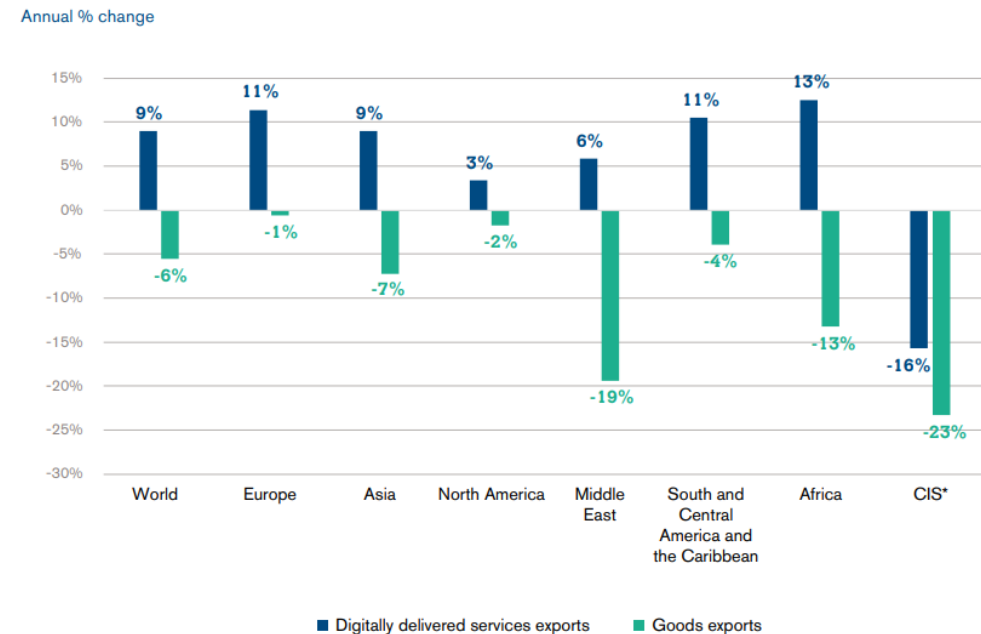
Source: WTO estimates in WTO Global Trade Outlook and Statistics and WTO Global Services Trade Data Hub.

Chart 22: Growth of digitally delivered services exports by region and selected group, 2015-2023
Index, 2015=100



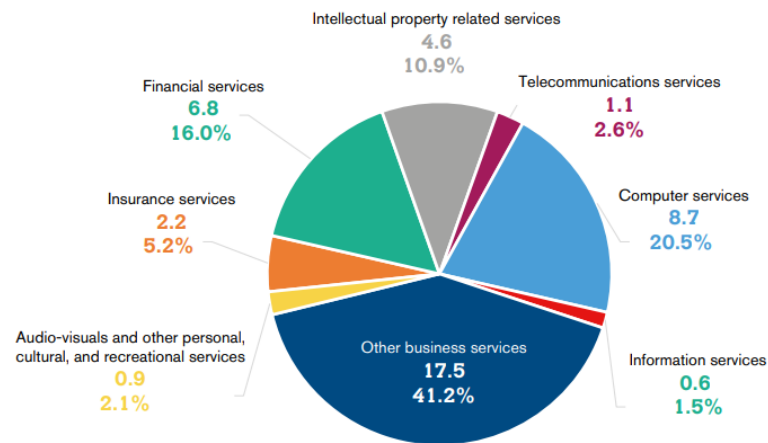
* The Commonwealth of Independent States includes certain associate and former member states.
Source: WTO estimates.

Chart 20: Growth of digitally delivered services exports and goods exports by region, 2023
Annual % change

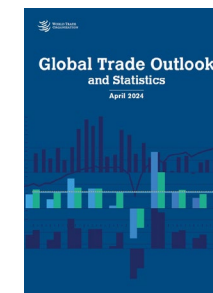


Note: Regions are ranked according to their share in global exports of digitally delivered services.
* The Commonwealth of Independent States includes certain associate and former member states.
Source: WTO estimates.

Chart 21: Structure of world exports of digitally delivered services, 2023
Billion US\$ and % share

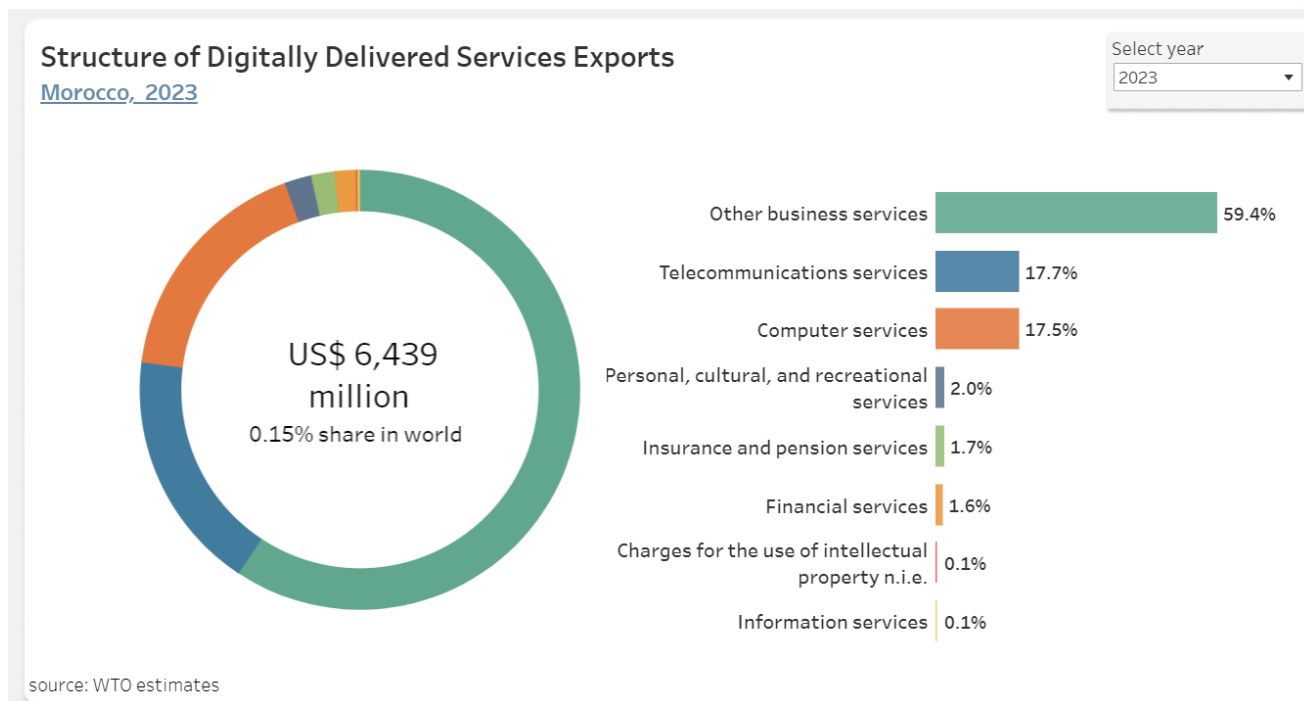


Source: WTO estimates.

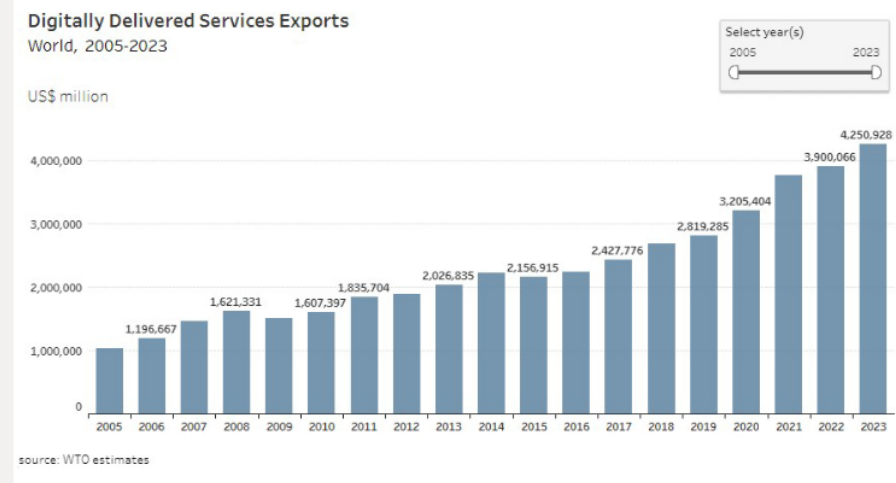


Global Services Trade Data Hub

The Global Services Trade Data Hub provides access to comprehensive data on services trade. It allows users to customize data according to their needs, to instantly create dynamic charts and to print reports, making it a highly useful tool for trade negotiators, analysts, researchers and decision-makers.



DIGITALLY DELIVERED SERVICES TRADE DATASET



The dataset contains WTO estimates on services traded through computer networks, such as the Internet, apps, emails, voice and video calls, and digital intermediation platforms. It covers over 200 economies and regions and 8 sub-sectors for the period 2005-23. The coverage of digitally delivered services reflects the definition of the [IMF-OECD-UNCTAD-WTO Handbook on Measuring Digital Trade](#). Data is consistent with the Trade in Services by Mode of Supply (TiSMoS) dataset until 2022, which allows a more detailed breakdown for these services, and contains the first estimates for 2023.

[Explore the data](#)

[WTO | Statistics - Global Services Trade Data Hub](#)

https://www.wto.org/english/res_e/statis_e/services_trade_data_hub_e.htm